

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FCC 95-500

In the Matter of)	
)	
Amendment of the Commission's)	ET Docket No. 95-183
Rules Regarding the 37.0-38.6 GHz and)	RM-8553
38.6-40.0 GHz Bands)	
)	
Implementation of Section 309(j) of the)	
Communications Act -- Competitive)	PP Docket No. 93-253
Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz)	

NOTICE OF PROPOSED RULE MAKING
AND
ORDER

Adopted: December 15, 1995

; Released: December 15, 1995

Comment Date: January 16, 1996

Reply Comment Date: January 31, 1996

By the Commission: Chairman Hundt dissenting in part and issuing a statement;
Commissioner Barrett issuing a statement; Commissioner Ness dissenting in part and issuing a
statement; Commissioner Chong issuing a statement.

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I. INTRODUCTION

1. By this action, we propose to amend Parts 1, 2, 21 and 94 of our rules to provide a channeling plan and licensing and technical rules for fixed point-to-point microwave operations in the 37.0-38.6 GHz (37 GHz) band.¹ Adoption of this proposal would make the band available for point-to-point microwave operations that would provide communications infrastructure such as "backhaul" and "backbone" communications links for services including broadband personal communications services (broadband PCS), cellular radio, and other commercial and private mobile radio operations.² We observe that such infrastructure could also facilitate the development of competitive wireless local telephone service. Further, we propose a channeling plan based on 50 MHz channel blocks, service areas based on Basic Trading Areas (BTAs), licensing by competitive bidding if mutually exclusive applications are filed, and a minimal number of technical rules designed to limit interference.³ In response to

¹ In a separate rule making, we proposed to consolidate the Parts 21 and 94 service rules for fixed microwave operations into a new Part 101. See Reorganization and Revision of Parts 1, 2, 21, and 94 of the Rules to Establish a New Part 101 Governing Terrestrial Microwave Fixed Radio Services, Notice of Proposed Rule Making, WT Docket No. 94-148, 10 FCC Rcd 2508 (1995). If the proposals in WT Docket No. 94-148 are adopted, we will merge any rules adopted in this proceeding into Part 101 consistent with the rules adopted in that proceeding.

² "Backhaul" links generally are used to interconnect a cell site with a mobile switching office and "backbone" links interconnect mobile switching offices with one another or with a central office.

³ BTAs are defined in the Rand McNally 1992 Commercial Atlas & Marketing Guide, 123rd Edition, pages 36-39. There are 487 BTAs as defined by Rand McNally. In PCS, we separately license the following six additional BTA-like areas: (1) American Samoa; (2) Guam; (3) Northern Mariana Islands; (4) Mayagüez/Aguadilla-Ponce, Puerto Rico; (5) San

a request from the National Telecommunications and Information Administration (NTIA), we solicit comment on additionally allocating the 37-38 GHz band to the space research (space-to-Earth) service.

2. In addition, we propose to amend the licensing and technical rules for fixed point-to-point microwave operations in the 38.6-40.0 GHz (39 GHz) band. Specifically, we propose that the unlicensed areas be licensed using BTA service areas and that auctions be employed should mutually exclusive applications be filed. In order to accommodate incumbent operations, we propose that licensees of rectangular service areas be given eighteen months from the adoption of a Report and Order in this proceeding to file with the Commission a certification that they have constructed a minimum average of four permanently installed and operating links per hundred square kilometers (approximately one link per ten square miles) of their licensed service area for each licensed channel block. Further, licensees with more than one channel block must certify that each channel block contains at least four permanently installed and operating links per hundred square kilometers that can not be reaccommodated in another channel block. If a licensee meets these threshold construction and filing requirements, then the licensee would retain its entire rectangular service area. However, if a licensee does not meet these requirements, then the license would be automatically canceled nineteen months from the adoption of a Report and Order in this proceeding. Further, licensees of rectangular service areas not meeting the above construction threshold must file a list of permanently installed and operating links that they wish to have grandfathered no later than eighteen months from the adoption of a Report and Order in this proceeding. The Commission would then relicense qualifying links individually. Failure to file timely a list of installed and operating links would result in automatic cancellation of the respective licenses. We also propose to modify the technical rules for the 39 GHz band to make them consistent with the technical rules we are proposing for the 37 GHz band. In anticipation of these rule revisions, on November 13, 1995, the Commission's Wireless Telecommunications Bureau released an Order (DA 95-2341) freezing the acceptance for filing of new applications for 39 GHz frequency assignments. In addition, we order that those pending applications that are subject to mutual exclusivity or that were put on public notice after September 13, 1995, shall not be processed pending the outcome of this proceeding.

Juan, Puerto Rico; and (6) the United States Virgin Islands. Thus, if we license this support spectrum using the same BTA service areas employed in PCS, there will be 493 BTA licenses for each frequency block. For a listing of the counties that comprise each BTA service area employed in PCS, see Public Notice, Report No. CW-94-02, released September 22, 1994. See also ¶ 23 for a discussion of copyright issues that must be resolved in this service.

II. BACKGROUND

3. The 37 GHz band is allocated to the fixed and mobile services on a co-primary basis for both Government and non-Government operations.⁴ We have not adopted service rules for this band, and therefore there are no non-Government incumbent operations in this band. There are a few incumbent Government fixed operations in this band.⁵

4. We have adopted a channeling plan and service rules for the adjacent 39 GHz band and this band is now used to support point-to-point communications.⁶ The 39 GHz band is channelized into fourteen 50 MHz pairs, with a 700 megahertz separation between transmit and receive channels. These channels are assigned for use within a rectangular service area that is described in the license application as bounded by maximum and minimum latitudes and longitudes. Licensees have complete flexibility to subdivide and reuse their channels within their service areas without further authorization from the Commission.

5. In the broadband PCS proceeding, we found that broadband PCS will provide a broad range of benefits and services and will be of vital importance to American business and consumers.⁷ Accordingly, we allocated 120 megahertz of spectrum for the licensed broadband PCS service. In that proceeding we declined to allocate additional spectrum for broadband PCS support operations because we believed that the spectrum already allocated for fixed microwave services was adequate for this purpose.⁸ We also noted that some of these support operations can be provided through facilities that do not require use of radio spectrum, such as fiber optic cable. Nevertheless, we stated that if it later appears that the lack of dedicated spectrum or of additional standards such as channelization impedes the development of broadband PCS, we would revisit this issue.⁹

⁴ See 47 C.F.R. § 2.106.

⁵ There are a total of nine NTIA authorized fixed links at two government installations in this band.

⁶ See 47 C.F.R. § 21.701(j).

⁷ See Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, Memorandum Opinion and Order, 9 FCC Rcd 4957, 4959-4960 (1994) (Broadband PCS Memorandum Opinion and Order).

⁸ See Broadband PCS Second Report and Order, 8 FCC Rcd 7700, 7740-7741 (¶¶ 93-96) (1993).

⁹ Id. at ¶ 96; see also Broadband PCS Memorandum Opinion and Order, 9 FCC Rcd at 4971 n. 26.

6. On September 9, 1994, the Fixed Point-to-Point Microwave Section of the Telecommunications Industry Association (TIA) filed a Petition for Rulemaking proposing a channeling plan and technical rules for the 37 GHz band so that this spectrum would be available for broadband PCS operators, cellular operators and other common carriers and private operators in order to satisfy point-to-point communications needs.¹⁰ TIA proposes a channeling plan with fourteen 50 MHz channel pairs separated by 700 megahertz for point-to-point operations, and four unpaired 50 MHz channels for one-way fixed and mobile operations, including broadcast and cable auxiliary operations. TIA further suggests that we consider granting licenses for service areas defined by Basic Trading Areas (BTAs). TIA also requests that we adopt technical standards for the 37 GHz band and modify the existing standards governing point-to-point operations in the 39 GHz band as follows: require transmitters to operate with a frequency tolerance of 0.001%; permit only Category A antennas;¹¹ authorize a transmitter power limit of 10 watts; and limit the equivalent isotropically radiated power (EIRP) to 50 dBW.¹² Finally, TIA suggests that we adopt rules that clarify when a licensee may apply for additional channels. Comments supporting TIA's petition were filed by Pacific Bell Mobile Services (Pacific Bell) and Microwave Radio Corporation (MRC). No opposing or reply comments were filed.

7. A substantial and growing number of applications to use the 39 GHz band were filed after the adoption of the Broadband PCS Second Report and Order, many of which requested authorization of several 50 MHz channel pairs in various metropolitan areas. The staff has concluded that many of these applications were submitted to obtain spectrum to be used in support of broadband PCS operations and that some of these applications may have been filed by speculators looking only for windfall profits in an aftermarket. Accordingly, the Commission's Common Carrier Bureau issued a Public Notice on September 16, 1994, elaborating on the showings required by our current rules.¹³

¹⁰ See Petition for Rulemaking filed by the Fixed Point-to-Point Microwave Section of the Telecommunications Industry Association on September 9, 1994. See also Public Notice, Report No. 2044, released December 1, 1994, which established RM-8553. On May 4, 1995, TIA amended its petition modifying its proposed channeling, service area, and licensing plans. See infra ¶ 9.

¹¹ Category A antenna standards are defined in Section 21.108 of the Commission Rules. See 47 C.F.R. § 21.108. Category A antennas provide a more focused antenna pattern than Category B antennas, allowing for greater frequency reuse.

¹² EIRP is defined in the Commission's Rules at 47 C.F.R. § 21.2.

¹³ See Public Notice, Mimeo No. 44787, released September 16, 1994. This public notice was prompted by an increase in the filing of 39 GHz applications. The public notice described showings required in applications for 39 GHz facilities. Pursuant to that notice, applicants are required to show that they have considered non-RF solutions and have a clear and present need for the channel, and to fully disclose the real party (or parties) in interest.

8. On March 21, 1995, NTIA informed us that it had reviewed TIA's petition.¹⁴ NTIA noted that the United States proposed and obtained additional space service allocations in the 37-40.5 GHz portion of the spectrum at the 1992 World Administrative Radio Conference (WARC-92).¹⁵ Specifically, the United States obtained a primary worldwide allocation for the space research (space-to-Earth) service¹⁶ in the 37-38 GHz band and a secondary allocation for the earth exploration satellite (space-to-Earth) service in the 37.5-40.0 GHz band.¹⁷ NTIA requests that the space research service be added to the Government allocations on a primary basis in the 37-38 GHz band and also proposes that the space research service be added to the non-Government allocations on a secondary basis in the 37-38 GHz band.

9. On May 4, 1995, TIA filed an amendment to its petition for rulemaking.¹⁸ TIA now suggests that 800 megahertz (37.0-37.4 and 37.7-38.1 GHz) of the band be channelized into 2.5, 5, 10, 20 and 40 MHz paired channels that would be licensed on a link-by-link basis. TIA continues to request that the 37.4-37.7 and 38.1-38.6 GHz portions of the band be channelized into six 50 MHz channel pairs and four 50 MHz unpaired channels that would be licensed using BTAs. Further, TIA requests that the 37 GHz band not be licensed by auction and that the six 50 MHz channel pairs be reserved for broadband PCS, cellular and

Normally, only one frequency or frequency pair per geographic area will be authorized to a single applicant initially. A geographic area will normally not be greater than a 50 mile radius about a specified point. Applications for additional channels will be considered only if an immediate requirement exists for simultaneous communications, frequency re-use is impossible, and all previously authorized frequencies are constructed and are fully loaded to a minimum efficiency of 1 bit per second per hertz.

¹⁴ See Memorandum from William Gamble, Chairman of the Interdepartment Radio Advisory Committee (IRAC), to William Torak, FCC Liaison Representative, IRAC, dated March 21, 1995, placed in RM-8553 on March 30, 1995.

¹⁵ See International Telecommunication Union (ITU) Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum, (WARC-92), Malaga-Torremolinos, 1992, at 91.

¹⁶ The space research service is defined as a radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes.

¹⁷ WARC-92 also allocated the 40.0-40.5 GHz band to the earth exploration-satellite (Earth-to-space) and space research (Earth-to-space) services on a primary basis and the earth exploration-satellite (space-to-Earth) service on a secondary basis. These allocations are beyond the scope of this proceeding.

¹⁸ See TIA Amendment to Petition for Rulemaking (amendment), filed on May 4, 1995 in RM-8553. TIA served a copy of this amendment on Pacific Bell and MRC.

specialized mobile radio (SMR) licensees until the year 2000. TIA also suggests that a 1 bit per second per hertz (bps/Hz) minimum bit efficiency should be enforced for the 5, 10, 20, and 40 MHz paired channels, except that a 12T1 transmission rate should be permitted in the 20 MHz channels.¹⁹ No party filed comments on the amendment.

III. DISCUSSION

A. Need for Additional Spectrum

10. In its petition as originally filed, TIA states that the 37 GHz band should be channelized to permit broadband PCS, cellular, and other common carrier and private operators to use the band to satisfy point-to-point communications needs. It argues that all of the available channel pairs in the 39 GHz band have already been assigned in major markets. TIA claims that if the 37 GHz band is not made available for licensing in a reasonable time frame, broadband PCS licensees will need to seek separate licenses for each link in other fixed service bands, such as 18 GHz and 23 GHz, to interconnect their cell sites.²⁰ TIA expresses concern that, if it becomes necessary for broadband PCS licensees to obtain separate licenses for each link to every individual cell site, the Commission's administrative processes could be overwhelmed by license applications and the availability of broadband PCS to the public would be significantly delayed. TIA therefore argues that expedited action in this proceeding is necessary so that broadband PCS operators will have adequate spectrum available to them when they begin construction of their systems.

11. TIA states that in addition to the interest demonstrated by broadband PCS licensees, cellular licensees have expressed interest in using the 39 GHz band to interconnect cell sites. It points out that cellular systems have continually increased capacity by adding cell sites placed closer together, which has required that cellular licensees obtain additional point-to-point links to interconnect their cells. It submits that as the distance between cell sites has decreased, the frequency band of choice to interconnect cell sites has shifted from 2 GHz to 18 GHz to 23 GHz. TIA expects that as cell sites continue to move closer together, cellular licensees will show substantial interest in the 39 GHz band. Further, it adds that a new group of local microwave common carriers is evolving to provide "last mile" services (short-haul communication links) to broadband PCS operators and to private companies that might need high-speed broad bandwidth links between offices, and that these new providers also will want to use the 37 GHz band. Therefore, TIA submits that the 39 GHz band will not be adequate to satisfy demand and requests that we channelize the 37 GHz band in the

¹⁹ A T1 rate is 1.544 megabit/second (Mbit/sec). Thus, a 12T1 rate is 18.528 Mbit/sec and this rate, in a 20 MHz channel, produces a bit efficiency of 0.9264 bps/Hz.

²⁰ Unlike the 39 GHz band, where a license is granted for a rectangular service area, licenses in the lower fixed-service bands are granted for specific communication links.

same manner as the 39 GHz band and harmonize the service rules for both bands so that channels throughout the combined 37-40 GHz band may be used seamlessly by broadband PCS and cellular licensees.

12. Pacific Bell and MRC agree with TIA that the 37 GHz band will be needed in addition to the 39 GHz band to provide adequate support spectrum for broadband PCS operations. Pacific Bell and MRC claim that the 37 GHz band will be needed to help create backbone networks for the interconnection of broadband PCS cell sites and for other uses that will assist in the provision of broadband PCS to the public. Pacific Bell argues that the record in the broadband PCS proceeding indicates that public demand for broadband PCS will be significant and that meeting this demand will require timely availability of substantial resources for backbone networks. MRC states that backhaul spectrum is needed to provide an alternative to leased wireline capacity provided by telephone and cable companies and that the 37 GHz band is well-suited for interconnecting broadband PCS cell sites.

13. We continue to believe that broadband PCS will provide a broad range of benefits and services and will be of vital importance to American business and consumers.²¹ Consequently, we believe it important that we provide every opportunity for broadband PCS to develop, including providing adequate spectrum to meet its infrastructure needs. We are concerned, however, that the current demand for spectrum in the 39 GHz band may preclude use of that band to provide adequate support spectrum for broadband PCS and that additional spectrum from the 37 GHz band will be needed to meet this demand. Further, in addition to providing spectrum for broadband PCS infrastructure, it appears that the 37 GHz band may be needed to support cellular and other commercial and private mobile radio operations. Therefore, we believe that the public interest will be served by developing service rules that will permit the use of the 37 GHz band -- in addition to the 39 GHz band -- for point-to-point operations. Accordingly, and consistent with TIA's proposal, we are proposing that the 37 GHz band be made available for use in point-to-point operations, such as those providing broadband PCS and cellular infrastructure links.²² In addition, we propose to amend licensing and technical rules for the 39 GHz band in order to harmonize the rules for the two bands so that the combined 37-40 GHz band is made more suitable for supporting broadband PCS, cellular and other communications services. However, we request comment on whether the 37 GHz band or a portion of it should be made available for a wider array of fixed services, such as point-to-multipoint systems; whether there is a requirement for mobile operations in

²¹ We believe that our commitment to broadband PCS is strongly supported by the competitive bidding results for Blocks A and B, which are 15 MHz channel block pairs licensed on a Major Trading Area (MTA) basis. As a result of the competitive bidding and anticipated pioneer's payment, the U.S. Treasury expects to receive a total of \$7,721,184,171 for the 102 MTA licenses.

²² We are also administratively updating Part 2 in order to be consistent with the Final Acts of WARC-92. See Appendix A.

the 37 GHz band and, if so, whether such operations should be on a co-primary or secondary basis to the point-to-point operations; and whether we have overestimated demand and, thus whether a portion of the band should be held in reserve for future services. If we decide to broaden the permissible use of these bands to include other fixed and/or mobile uses, we would not anticipate separately licensing such uses but rather including them within the uses permitted under our proposed BTA licenses. This would be accomplished by licensing this spectrum under the recently-adopted General Wireless Communications Service (GWCS) rules²³ or the Licensed Millimeter Wave Service (LMWS) rules proposed in ET Docket No. 94-124 (Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications), Notice of Proposed Rule Making, 9 FCC Rcd 7078, 7086-7087 (¶¶ 20-22) (1994).

14. We also solicit comment on the NTIA's request that the 37-38 GHz band be allocated to the space research (space-to-Earth) service for Government use on a co-primary basis with the fixed and mobile services. The United States actively sought and achieved an international agreement for this space research allocation at WARC-92, including sharing criteria between space and terrestrial radio communications services in this band.²⁴ Accordingly, we solicit comment on whether Government space research operations will be able to share this band with non-Government point-to-point operations using the sharing

²³ See Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, 4660-4685 MHz, ET Docket No. 94-32, Second Report and Order, 60 Fed. Reg. 40712 (August 9, 1995) (GWCS Second Report and Order).

²⁴ Those sharing criteria are: The power flux-density at the Earth's surface produced by emissions from a space station in the 31.0-40.5 GHz band, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the following values:

-115 dB (W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

-115 + 0.5(δ - 5) dB (W/m²) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane;

-105 dB (W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux-density which should be obtained under assumed free-space propagation conditions. See ITU Radio Regulations, Edition of 1990, Revised in 1994, No. 2578 at RR28-12; see also id. No. 2581 at RR28-13. We note that these are interim limits that apply only until such time as a future world radiocommunication conference endorses final limits; see also id. Nos. 2582.1, 2583, 2584, and 2585.

criteria adopted at WARC-92, whether the band should be restricted exclusively to fixed operations, or whether some spectrum should be reserved solely for Government space research. If the band is shared, we anticipate that license applications would be coordinated and issued between Government space research operations and non-Government point-to-point operations on a first-come, first-served basis and propose to employ our existing rules for such coordination.²⁵

15. In addition to the Government allocation, NTIA requests that we allocate the 37-38 GHz band to the space research (space-to-Earth) service on a secondary basis for non-Government use. We are unaware of any such requirements and therefore are not making such a proposal. However, we solicit comment on whether there are requirements for non-Government space research in this band and, if so, to what extent we should allocate spectrum for this service and what service rules should apply.

B. Channeling Plan

16. In its petition for rulemaking as originally filed, TIA proposed that the 37 GHz band be channelized into fourteen 50 MHz paired channels with a 700 megahertz transmit/receive channel separation,²⁶ and four 50 MHz unpaired channels. It noted that this paired channeling plan would be consistent with that currently used in the 39 GHz band. TIA states that such consistent spacing between transmit and receive channels is important to equipment manufacturers because it would allow for equipment commonality between the bands, thereby resulting in lower equipment costs. Also, TIA states that a need exists for unpaired frequencies that would be available to portable and fixed services for broadband video or digital applications, for one-way point-to-point or portable point-to-point use. TIA argues that its channeling plan would allow existing users of 39 GHz portable microwave radios to continue employing their equipment and also would accommodate one-way users involved in broadband services, such as television, security or wide area network applications.

17. TIA also proposes that the licensee of a channel in the 37 GHz band be allowed to subdivide and reuse its channel virtually without limitation in its service area, as is done in the 39 GHz band. TIA argues that the short propagation distances in this range of the radio spectrum allow a subchannel to be reused many times within a metropolitan area without causing interference. It also proposes that the subchannelization be based on an underlying grid of 1.25 MHz increments, because such a subchanneling plan would ease frequency

²⁵ The administrative aspects of the coordination process are set forth in §§ 21.100(d) and 21.706(c) and (d) in the case of coordination of terrestrial stations with earth stations, and in § 25.203 in the case of coordination of earth stations with terrestrial stations. The technical aspects of the coordination process are set forth in §§ 25.252 through 25.256. See 47 C.F.R. § 25.251.

²⁶ For example, 37.00-37.05 GHz would be paired with 37.70-37.75 GHz.

coordination at channel edges and at geographic boundaries. It states that this plan would permit the use of standardized frequency synthesizers, thereby resulting in lower equipment costs. Further, TIA proposes that licensees be required to subchannelize in a manner that maximizes the capacity of the channel assigned to them and minimizes the likelihood of interference to adjacent channel licensees. Finally, TIA requests that we adopt this same 1.25 MHz grid for subchannelization in the 39 GHz band.

18. In its amendment, TIA revised its channeling plan to include some 2.5 MHz, 5 MHz, 10 MHz, 20 MHz and 40 MHz paired channels in the 37.0-37.4 and 37.7-38.1 GHz portion of the 37 GHz band, but did not suggest a specific channeling plan, *e.g.*, what the proper mix of these channels should be. TIA states that these various channel sizes are required to accommodate the specific needs of private users and to prevent inefficient use of the spectrum by operators that cannot justify the need for a multitude of links. TIA continues to request that the 37.4-37.7 and 38.1-38.6 GHz portions of the band be channelized into six 50 MHz channel pairs and four 50 MHz unpaired channels.

19. We tentatively find that the 50 MHz channeling plan originally proposed by TIA would provide for efficient and effective use of the 37 GHz band for point-to-point operations by broadband PCS, cellular, and other commercial and private mobile radio operations because the commonality of this channeling plan with the channeling plan for 39 GHz will permit manufacturers to provide equipment quickly and to lower equipment costs for both bands. Accordingly, we propose to adopt a channeling plan for the entire 37 GHz band based on 50 MHz channel blocks and a 700 megahertz separation between transmit and receive frequencies, with four unpaired 50 MHz channel blocks, as listed in Appendix A. We believe this is necessary to meet the infrastructure needs of broadband PCS, SMR and cellular licensees. However, we solicit comment on whether there is a need for a channeling plan that would provide for a variety of channel pairs licensable on an individual link basis, as suggested by TIA in its amendment. See ¶ 24, *infra*. We also solicit comment on whether there is a need for the four 50 MHz unpaired channel blocks, as we are proposing, or whether these channel blocks should be made available for additional channel block pairs to meet demand for paired operations. In particular, we observe that a channeling plan based on an 800 megahertz transmit/receive separation, or an interleaved channeling plan that uses either a 200 or 400 megahertz separation, would provide sixteen 50 MHz channel block pairs instead of the fourteen 50 MHz channel block pairs and four 50 MHz unpaired channel blocks that we are proposing. Accordingly, we request comment on whether we should choose any of these alternative approaches rather than the plan proposed.

20. Further, we propose to allow licensees to subdivide their channel blocks in the 37 GHz band as they so choose. We decline to propose subchannels that are restricted to 1.25 MHz increments because we believe that, due to the relatively short propagation distances at these frequencies, the lack of a subchannelization plan is unlikely to cause any significant coordination problems in this band. We anticipate that many of the operations in this band will provide infrastructure links for broadband PCS operations, and we note that

broadband PCS licensees have flexibility to subdivide their channel blocks.²⁷ Therefore, adopting any subchannelization plan in the 37 GHz band may force broadband PCS licensees to use a plan that is inconsistent with their operations in the broadband PCS band.²⁸ We believe that the most flexible and efficient use of this spectrum would come from authorizing licensees to freely subdivide these channel blocks as they see fit. Moreover, we note that the absence of Commission standards in this area does not preclude the voluntary development of industry standards. Nonetheless, we solicit comment on this matter.

C. Service Areas

21. TIA originally recommended that all channels in the 37 GHz band be licensed using BTA service areas. It argued that BTAs are better adapted to the needs for broadband PCS infrastructure than are the rectangular service areas used in licensing the 39 GHz band. However, in its amendment, TIA now proposes that 800 megahertz of the band be channelized into 2.5, 5, 10, 20 and 40 MHz paired channels as addressed above and that this spectrum be licensed on a traditional individual link basis. TIA states that it is essential that private users of short range microwave links be able to own and control their microwave communication infrastructure for reliability reasons. TIA argues that these private users provide critical services to the public and do not generate profits from their communication infrastructure.

22. Complementary to our proposal to channelize the entire band into 50 MHz paired and unpaired channel blocks, we propose to license all the channel blocks using BTA service areas. We are proposing BTA service areas for this frequency band because the service areas adopted in broadband PCS are BTAs and Major Trading Areas (MTAs), which in turn consist of two or more BTAs.²⁹ We believe use of BTAs will provide a more orderly structure for the licensing process than allowing each licensee to define its own service area, as is currently done in the 39 GHz band. Nonetheless, we solicit comment on whether some or all of the channel blocks should be made available for licensing over various and significantly larger geographic areas, such as on MTA, regional and nationwide bases.³⁰ We also seek comment

²⁷ See Broadband PCS Second Report and Order, 8 FCC Rcd 7700, 7755.

²⁸ For example, if a broadband PCS licensee used a 2 MHz subchannelization plan in its broadband PCS spectrum, it may wish to use a consistent channeling plan in its support spectrum, and a 1.25 MHz subchannelization plan would prohibit that.

²⁹ See 47 C.F.R. § 24.202.

³⁰ We observe that with 32 channels, each licensed using the 493 BTAs, there would be 15,776 BTA licenses available in the 37-40 GHz band. If instead we were to generally use larger service areas, for example, 4 BTAs, 10 MTAs, 10 regional (e.g., the 5 regions, each with approximately 20% of the nation's population, which were developed as a service area in the narrowband PCS proceeding), and 8 nationwide licenses, there would only be 2,540

on the use of service areas based on the 172 Economic Areas (EAs) developed by the Department of Commerce's Bureau of Economic Analysis or based on the 349 Component Economic Areas (CEAs) of which the EAs are composed.³¹ We request comment on whether these geographic areas would be appropriate for licensing the 37 GHz and 39 GHz bands or whether other alternative licensing areas would be more appropriate.

23. We note that Rand McNally & Company owns the copyright to the MTA/BTA Listings, which identify the BTAs contained in each MTA and the counties comprising each BTA. This information is also provided in Rand McNally's Trading System MTA/BTA Diskette and is geographically represented in a map contained in Rand McNally's 1992 Commercial Atlas & Marketing Guide. Rand McNally has licensed through an agreement with the Personal Communications Industry Association (PCIA) the use of its copyrighted MTA/BTA Listings and maps for certain services such as PCS and 800 MHz SMR. It is unclear as to whether the licensing agreement covers the intermediate links, which together with the end links enable the delivery of an end-to-end service. We therefore encourage PCIA and Rand McNally to clarify the licensing agreement.

24. With regard to TIA's asserted continuing need for individually licensed links, we propose not to set aside any channels for individually licensed links in the 37 GHz band, but we seek comment on methods available to meet the needs of those who might desire individual links, smaller geographic service areas, or smaller spectrum blocks. For example, should we adopt rules regarding geographic partitioning to allow for smaller geographic service areas?³² Should we allow some form of spectrum disaggregation? Commenters suggesting methods to meet the spectrum needs of private users should address specifically how their proposals would work from an administrative standpoint and how these proposals

licenses available in the 37-40 GHz band, which is a 84% reduction in the number of available licenses. This reduction should enable us to more swiftly license these bands.

³¹ According to the Department of Commerce, each EA "consists of one or more economic nodes -- metropolitan areas or similar areas that serve as centers of economic activity -- and the surrounding counties that are economically related to the nodes. (Metropolitan areas include metropolitan statistical areas (MSAs), primary metropolitan statistical areas (PMSAs), and New England county metropolitan areas (NECMAs).) Commuting patterns are the main factor used in determining the economic relationship among counties. The EA economic areas definition procedure requires that, as far as possible, each area include both the place of work and the place of residence of its labor force." See Final Redefinition of the BEA Economic Areas, 60 Fed. Reg. 13114 (March 10, 1995) (reducing number of EAs from 183 to 172). In addition, we would separately license the following three EA-like areas: (1) Puerto Rico and the United States Virgin Islands; (2) Guam and the Northern Mariana Islands; and (3) American Samoa.

³² See specific proposal at ¶¶ 89-90, infra, regarding geographic partitioning for rural telephone companies.

would comply with requirements in the Communications Act and the Commission's Rules that licensees remain in control of the spectrum they are authorized to use and that any transfer of control must be approved by the Commission. In addition, commenters should address the implications of these arrangements for other proposed rules such as buildout requirements, transfer limitations for small business, and license terms. Alternatively, we request comment on whether these needs for individual microwave links can be met through the purchase of publicly available common carrier offerings by 37 GHz licensees. We also solicit comment on TIA's proposal and whether we should set aside some channels to accommodate individually licensed links, including whether we should adopt a channeling plan with some channel pairs smaller than 50 MHz (i.e., 2.5, 5, 10, 20 and 40 MHz). Further, we solicit comment on whether any channel blocks that may be set aside for individually licensed links should come exclusively from the 39 GHz band.

D. Licensing Method

25. In its petition as originally filed, TIA did not recommend a licensing method for the 37 GHz band. However, in its amendment, TIA requests that the 37 GHz band not be subject to auctions, arguing that auctioning the band would serve no useful purpose and would add unacceptable costs and barriers to legitimate users of the spectrum. We have given careful consideration to but do not agree with TIA's argument, and thus we propose to use competitive bidding to select licensees in the 37 GHz band. Competitive bidding is an extremely efficient method of assuring, with a minimum of regulatory burden, that channels are assigned only to applicants with the greatest need for the spectrum.

26. Section 309(j)(2)(A) of the Communications Act of 1934, as amended (Communications Act), permits competitive bidding to be used if we determine that:

the principal use of such spectrum will involve, or is reasonably likely to involve, the licensee receiving compensation from subscribers in return for which the licensee--

(i) enables those subscribers to receive communications signals that are transmitted utilizing frequencies on which the licensee is licensed to operate; or

(ii) enables those subscribers to transmit directly communications signals utilizing frequencies on which the licensee is licensed to operate....³³

The legislative history of this section shows that Congress intended to authorize competitive bidding for subscriber-based services only, as opposed to non-subscriber based services such as broadcasting.³⁴ In addition to the "principal use" requirement, for competitive bidding to

³³ 47 U.S.C. § 309(j)(2)(A).

³⁴ See H.R. Rep. No. 111, 103d Cong., 1st Sess. 253 (1993), which states in pertinent part: "The enactment of section 309(j) should not affect the manner in which the Commission

be permitted, mutually exclusive applications for initial licenses or construction permits must have been accepted for filing³⁵ and the use of competitive bidding must promote the objectives contained in Section 309(j)(3)(A) through (D) of the Communications Act.

27. In the Competitive Bidding Notice of Proposed Rule Making, we proposed that licenses for frequencies used as intermediate links in the provision of a continuous, end-to-end service to a subscriber would be subject to competitive bidding.³⁶ In that Notice we stated that services such as common carrier point-to-point microwave utilized as part of end-to-end subscriber-based service offerings would fall within the criteria described in Section 309(j)(2)(A)(i) and (ii) because the licensed spectrum is used as an integral part of an end-to-end service offering, enabling paying subscribers either to transmit directly or receive "communications signals utilizing frequencies on which the licensee is licensed to operate." However, in the Second Report and Order in that proceeding, we decided not to auction intermediate links.³⁷ We reasoned that before employing competitive bidding, the Commission is required to determine that mutually exclusive applications are likely to be filed and that such bidding would promote the objectives of Section 309(j)(3)(A) through (D) of the Communications Act. With regard to mutual exclusivity, we noted that in those frequency bands most often utilized as intermediate links, mutual exclusivity is usually avoided by employing a frequency coordination process for each intermediate link prior to the time an application is granted. With regard to the objectives of Section 309(j)(3)(A) through (D), we concluded that auctioning intermediate links could significantly delay the development and rapid deployment of new technologies, products and services for the benefit of the public, that auctions for these links could impose significant administrative costs on licensees and the Commission, and that it was unclear whether competitive bidding for intermediate links would

issues licenses for virtually all private services, including frequencies utilized by Public Safety Services, the Broadcast Auxiliary Service, and for subcarriers and other services where the signal is indivisible from the main channel signal. Similarly, inasmuch as mass media broadcast signals are provided to the general public without the payment of a subscription fee, the current licensing practices of the FCC remain unchanged." See also H.R. Conf. Rep. No. 213, 103d Cong., 1st Sess. 481-82 (1993).

³⁵ See 47 U.S.C. § 309(j)(1).

³⁶ See Implementation of Section 309(j) of the Communications Act - Competitive Bidding, PP Docket No. 93-253, Notice of Proposed Rule Making, 8 FCC Rcd 7635, 7639 (¶ 28) (1993) (Competitive Bidding Notice of Proposed Rule Making).

³⁷ See Implementation of Section 309(j) of the Communications Act - Competitive Bidding, PP Docket No. 93-253, Second Report and Order, 9 FCC Rcd 2348, 2355-2356 (¶ 41) (1994) (Competitive Bidding Second Report and Order).

recover for the public a significant portion of the value of the spectrum, prevent unjust enrichment or promote efficient and intensive use of the spectrum.³⁸

28. Our proposal to use BTA service areas in the 37 GHz band and our subsequent experience in licensing frequencies in the 39 GHz band has caused us to reconsider the decision not to license intermediate links by competitive bidding. First, as we concluded in the Competitive Bidding Notice, point-to-point microwave channels used as part of end-to-end subscriber-based service offerings would meet the criteria set forth in Section 309(j)(2)(A). Therefore, we tentatively conclude that, based on TIA's description of the likely uses of the 37 GHz band by broadband PCS and other carriers, the use of such spectrum will satisfy the "principal use" test in the competitive bidding statute. Second, because BTAs are large areas, we believe that defining service areas by BTAs will likely result in the filing of mutually exclusive applications.³⁹ Third, our experience with auctions in other bands leads us to conclude that an auction for intermediate links within a well defined service area will neither significantly delay the provision of broadband PCS or other services to the public nor impose significant administrative costs on the applicants or the Commission. Fourth, a review of licenses in the 39 GHz band reveals that few channels are now available in most metropolitan areas and, thus, that making more channels available through competitive bidding will likely promote the development and rapid deployment of new technologies, promote economic opportunity and competition, and ensure that new and innovative technologies are readily accessible to the American people. Finally, some of the licensees in the 39 GHz band have offered to sell or lease their licenses to broadband PCS operators. These offers suggest that some of these licensees may not have ever intended to directly serve the public, but rather to hold their own auctions and thereby deprive the public of those revenues. Therefore in sum, we believe that an auction for the 37 GHz band may be desirable. An auction would place licenses in the hands of those who value this spectrum most highly, recover a portion of the value of the spectrum for the public, prevent the award of licenses to speculators and promote efficient use of this spectrum. Consequently, we find that an auction of this spectrum is likely to promote the objectives of Section 309(j)(3)(A) through (D) of the Communications Act. Accordingly, we propose to modify Section 1.2102(b)(4) of our rules to implement this proposal.

³⁸ Id. at ¶ 43.

³⁹ In most point-to-point microwave bands, service is licensed on a link-by-link basis and licensees are required to coordinate and engineer their systems to avoid conflicts with existing and previously proposed systems. In the broadband PCS service, however, we have found that use of large-sized (*i.e.*, MTA and BTA) service areas and appropriate field strength limits renders unnecessary such general prior coordination; instead, informal coordination among broadband PCS systems is needed only near service area borders.

E. Competitive Bidding Issues

29. We have proposed that we will use auctions to issue licenses in the 37 GHz band. Accordingly, we wish to fully explore issues related to competitive bidding.

1. Competitive Bidding Design

a. General Competitive Bidding Rules

30. In the Competitive Bidding Second Report and Order and its progeny, we established the criteria to be used in selecting from among auction methodologies to use for each particular auctionable service and prescribed rules and procedures for general and specific use.⁴⁰ Generally, we concluded that awarding licenses to those parties who value them most highly would foster Congress's policy objectives. We noted there that, since a bidder's ability to introduce valuable new services and to deploy them quickly, intensively, and efficiently increases the value of a license to that bidder, an auction design that awards licenses to those bidders with the greatest willingness to pay tends to promote the development and rapid deployment of new services and the efficient and intensive use of the spectrum. We also found that: (1) licenses with strong value interdependencies should be auctioned simultaneously, and (2) multiple round auctions generally will yield more efficient allocations of licenses and higher revenues by providing bidders with information regarding other bidders' valuations of licenses, especially where there is substantial uncertainty as to value.⁴¹ Thus, we concluded, where the licenses to be auctioned are interdependent and their value is expected to be high, simultaneous multiple round auctions would best achieve the Commission's goals for competitive bidding.⁴²

⁴⁰ Competitive Bidding Second Report and Order, 9 FCC Rcd 2348 (1994); recon. Second Memorandum Opinion and Order, 9 FCC Rcd 7245 (1994) (Competitive Bidding Second Memorandum Opinion and Order); Third Report and Order, 9 FCC Rcd 2941 (1994) (Competitive Bidding Third Report and Order), establishing rules for narrowband PCS; recon. Third Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 10 FCC Rcd 175 (1994) (Competitive Bidding Third Memorandum Opinion and Order and Further Notice of Proposed Rulemaking); Fourth Report and Order, 9 FCC Rcd 2330 (1994), establishing rules for Interactive Video and Data Service; Fifth Report and Order, 9 FCC Rcd 5532 (1994) (Competitive Bidding Fifth Report and Order), establishing rules for Broadband PCS; recon. Fourth Memorandum Opinion and Order, 9 FCC Rcd 6858 (1994) (Competitive Bidding Fourth Memorandum Opinion and Order).

⁴¹ Competitive Bidding Second Report and Order, 9 FCC Rcd 2348, 2360 (¶ 69).

⁴² Id. at 2366 (¶¶ 109-111).

b. Competitive Bidding Design for the 37 GHz Band

31. Simultaneous Multiple Round Auctions. Based on the factors identified in the Competitive Bidding Second Report and Order and our prior auction experiences, we tentatively conclude that simultaneous multiple round auctions are appropriate for the 37 GHz band. Compared with other bidding mechanisms, simultaneous multiple round bidding will generate the most information about license values during the course of the auction and provide bidders with the most flexibility to pursue back-up strategies. As in the case of PCS,⁴³ the 37 GHz licenses are interdependent, and licensees likely will aggregate and substitute across spectrum blocks and geographic regions. Our experience to date is that simultaneous multiple round bidding is efficient and cost-effective. Additionally, simultaneous multiple round bidding is likely to generate the most information about license values during the course of the auction and facilitate efficient aggregation of licenses across spectrum bands.⁴⁴ We seek comments on this tentative conclusion and on its impact on competitive bidding in the 37 GHz band.

32. Circumstances Leading to Choice of Other Designs. We propose to tailor the auction design to fit the characteristics of the licenses to be awarded.⁴⁵ While we tentatively conclude that simultaneous multiple round bidding is the most effective and efficient bidding design for the 37 GHz band, it is possible that another bidding method may be more appropriate for all licenses. Where there is less interdependence among licenses, there is also less benefit to auctioning them simultaneously.⁴⁶ When the values of particular licenses to be auctioned are low relative to the costs of conducting a simultaneous multiple round auction, we may need to consider auction designs that are relatively simple, with low administrative costs and minimal costs to auction participants. For example, with large numbers of low value licenses, we may decide that it is preferable to implement a low cost auction method such as single round sealed bidding to minimize cost and expedite the licensing process.⁴⁷ We may also wish to consider a single round of bidding in certain auctions where eligibility requirements limit participation to few bidders.⁴⁸ We additionally note that the presence of

⁴³ We adopted simultaneous multiple round auctions as the auction methodology for both broadband and narrowband licenses. Competitive Bidding Fifth Report and Order, 9 FCC Rcd 5532, 5544 (¶¶ 31-32) for broadband PCS and Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2947-2949 (¶¶ 17-21) for narrowband PCS.

⁴⁴ See, e.g., Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2946 (¶ 13).

⁴⁵ Id. at 2947 (¶ 15).

⁴⁶ Id.

⁴⁷ Id.

⁴⁸ Id.

incumbents on certain channels, such as exist in the 39 GHz band, could affect the relative desirability and value of otherwise identical licenses in ways we do not anticipate. We seek comments on any alternative bidding designs and their applicability as a competitive bidding method in the 37 GHz band.

33. Combinatorial Bidding. In general terms, combinatorial bidding allows bidders to bid for multiple licenses as "all or nothing" packages.⁴⁹ Combinatorial bidding can be implemented with either simultaneous or sequential auction designs.⁵⁰ While there are significant benefits associated with combinatorial bidding, especially in terms of efficient aggregation of licenses, we previously concluded that simultaneous multiple round auctions offer many of these same advantages without the same degree of administrative and operational complexity and without biasing auction outcomes in favor of combination bids.⁵¹ However, since simultaneous multiple round bidding may potentially prove to be our preferred auction method for awarding 37 GHz licenses, we tentatively conclude that combinatorial bidding will be unnecessary in most 37 GHz auctions. While 37 GHz licenses are likely to be worth more to some bidders as a part of a package, we believe that simultaneous multiple round bidding will provide these bidders with ample opportunity to express the value of interdependent licenses. Moreover, we tentatively conclude that there will not be any extreme discontinuity in value if some licenses in a package are not obtained.⁵² We believe that the opportunity to acquire licenses in after-market transactions and the ability to withdraw bids (upon additional payment) will limit the risks associated with failing to successfully acquire all of the licenses in a desired package.⁵³ In circumstances where we do not use simultaneous multiple round bidding, however, we may permit combinatorial bidding. We seek comment on these proposals and tentative conclusions.

c. Bidding Procedures

34. Grouping of Licenses. We determined in the Competitive Bidding Second Report and Order that in a multiple round auction, highly interdependent licenses should be grouped together and put up for bid at the same time because such grouping provides bidders with the most information about the pieces of complementary and substitutable licenses during the

⁴⁹ In combinatorial bidding, if a bid for a group of licenses exceeds the sum of the highest bids for the individual licenses that comprise the package, then the package bid would win. We may wish to institute a premium so that the combinatorial bid would win only if it exceeded the sum of the bids for individual licenses by a set amount.

⁵⁰ Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2949-2950 (¶¶ 23-24).

⁵¹ Id.

⁵² Id.

⁵³ Id.

course of an auction.⁵⁴ We also determined that the greater the degree of interdependence among the licenses, the greater the benefit of auctioning a group of licenses together in a simultaneous multiple round auction.⁵⁵ Whether we use our preferred approach of a sequence of simultaneous multiple round auctions or sequential individual auctions, we must choose which licenses will be auctioned together. The importance of the choice of license groupings increases with the degree of interdependence among the individual licenses or groups of licenses to be auctioned. Grouping interdependent licenses together and putting them up for bid at the same time will facilitate awarding licenses to bidders who value them the most highly by providing bidders with information about the prices of complementary and substitutable licenses during the course of an auction.⁵⁶ Accordingly, we propose grouping 37 GHz licenses into the various simultaneous auctions by aggregating together those licenses exhibiting the greatest degree of interdependence so that there will be limited interdependence across groups.

35. Choosing which licenses to auction simultaneously requires a judgment about the degree of interdependence, *i.e.*, the extent to which the amount bidders are willing to pay for one license depends on the price of another.⁵⁷ Licenses may be interdependent either because they are substitutes or because they are complements. With substitutes, the lower the price of one license, the less a bidder will be willing to pay for another. With complementary licenses, on the other hand, the lower the price of one license, the more a bidder will be willing to pay for another. This is true because generally complementary licenses are worth more as part of a package than individually.⁵⁸ For example, bidders are likely to be willing to pay more for two geographically contiguous 37 GHz licenses than two equivalent non-contiguous licenses, and a single bidder may be willing to pay more for the two licenses than would two separate bidders.⁵⁹

36. Based on the foregoing, we tentatively conclude that we will auction all 37 GHz licenses through a sequential series of simultaneous auctions. In each case, the licenses are complements as well as substitutes, and thus their values are highly interdependent. While we observe that, given the large number of licenses involved, it might be administratively impractical to auction all 37 GHz licenses together, we ask nonetheless whether the interdependencies among all 37 GHz licenses are sufficiently strong that we should make

⁵⁴ Competitive Bidding Second Report and Order, 9 FCC Rcd 2348, 2366 (¶¶ 106-107).

⁵⁵ Id. at 2363-2364 (¶¶ 89-94).

⁵⁶ See, e.g., Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2951 (¶ 26).

⁵⁷ Id.

⁵⁸ Id.

⁵⁹ Id.

every effort to have a single 37 GHz auction. We also specifically solicit comments on alternative license groupings and ask bidders to explain how such groupings would benefit bidders.

37. Bid Increments. As with the rules we adopted for previous multiple round auctions for other services, we propose to establish minimum bid increments for bidding in each round of the auction, based on the same considerations in our prior orders.⁶⁰ Where we use simultaneous multiple round auctions, it is important to specify minimum bid increments. The bid increment is the amount or percentage by which the bid must be raised above the previous round's high bid in order to be accepted as a valid bid in the current bidding round.⁶¹ The application of a minimum bid increment speeds the progress of the auction and, along with activity and stopping rules, helps to ensure that the auction comes to closure within a reasonable period of time.⁶² Establishing an appropriate minimum bid increment is especially important in a simultaneous auction with a simultaneous closing rule. In that case, all markets remain open until there is no bidding on any license and a delay in closing one market will delay the closing of all markets.⁶³

38. We propose to announce by public notice prior to auction the specific bid increment that will be used. We anticipate starting the 37 GHz auction with relatively large bid increments, and adjusting the increments as bidding activity dictates.⁶⁴ Because we propose to use simultaneous multiple round auctions for most 37 GHz licenses, we believe that it is necessary to impose a minimum bid increment to ensure that the 37 GHz auctions conclude within a reasonable period. We believe that it is important in establishing the amount of the minimum bid increment to express such increment as both a percentage of the high bid from the previous round and as a fixed dollar amount per megahertz per service area population (MHz-pops), whichever is greater. This will ensure a timely completion of the auction even if bidding begins at a very low dollar amount.⁶⁵ We also propose to retain the discretion to vary the minimum bid increments for individual licenses or groups of licenses at any time before or during the course of the auction, based on the number of bidders, bidding activity, and the aggregate high bid amounts. We propose to retain the discretion to keep an auction open if there is a round in which no bids or proactive waivers are submitted, as discussed in ¶¶ 39-48, infra. We seek comment on these proposals.

⁶⁰ Id. at 2953 (¶¶ 30-32).

⁶¹ Id. at 2953 (¶ 30).

⁶² Id.

⁶³ Id.

⁶⁴ Id.

⁶⁵ Id. at 2953 (¶ 31).

39. Stopping Rules for Multiple Round Auctions. In multiple round auctions, a stopping rule must be established for determining when the auction is over.⁶⁶ Three types of stopping rules exist that could be employed in simultaneous multiple round auctions: markets may close individually, simultaneously or a hybrid approach may be used.⁶⁷ Under a market-by-market approach, bidding closes on each license after one round passes in which no new acceptable bids are submitted for that particular license. With a simultaneous stopping rule, bidding remains open on all licenses until there is no bidding on any license.⁶⁸ Under this approach, all markets will close if a single round passes in which no new acceptable bids are submitted for any license. Using a hybrid approach, we may use a simultaneous stopping rule, along with an activity rule designed to bring the markets subject to the simultaneous stopping rule to a close within a reasonable period of time, for the higher value licenses. And for lower value licenses, where the loss from eliminating some back-up strategies is less, we may use simpler market-by-market closing. Such a hybrid approach might simplify and speed up the auction process without significantly sacrificing efficiency or expected revenue.⁶⁹ We propose announcing by Public Notice before each auction the stopping rule that we will use. We seek comments on the various options for stopping rules and ask commenters to address which rules would be optimal for simultaneous multiple round auctions of licenses in the 37 GHz band.

⁶⁶ Competitive Bidding Fifth Report and Order, 9 FCC Rcd 5532, 5550-5552 (¶¶ 46-49); Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2954-2955 (¶¶ 33-35); see also Amendments of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in 896-901 MHz and 935-940 MHz Bands Allocated to the Specialized Mobile Radio Pool, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, and Implementation of Sections 3(n) and 322 of the Communications Act, PR Docket No. 93-25, GN Docket No. 93-252, Second Report and Order and Second Further Notice of Proposed Rule Making, 10 FCC Rcd 6884 (1995)(900 MHz Second Report and Order) at ¶¶ 81-83; see also Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service, Report and Order, MM Docket No. 94-131, PP Docket No. 93-253, FCC 95-230 (June 30, 1995) at ¶¶ 114-123 (MMDS Report and Order).

⁶⁷ Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2954 (¶ 33); see also 900 MHz Second Report and Order at ¶ 81.

⁶⁸ This approach has the advantage of providing bidders full flexibility to bid for any license as more information becomes available during the course of the auction, but it may lead to very long auctions, unless an activity rule is imposed. Furthermore, such a stopping rule may be vulnerable to strategic delay by bidders seeking to impede closure of the auction.

⁶⁹ See, e.g., Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2954 (¶ 33).

40. In the event we adopt a simultaneous stopping rule, we propose to retain the discretion to declare at any point in a simultaneous multiple round auction that the auction will end after one additional round or some other specified number of additional rounds. This will prevent bidders from strategically delaying an auction by bidding on one license in order to delay the closing of bidding on all licenses.⁷⁰ This proposal would also ensure ultimate Commission control over the duration of the auction. Moreover, we tentatively reserve the discretion to vary the duration of bidding rounds or the interval at which bids are accepted (e.g., run two or more rounds per day rather than one), in order to move the auction toward closure more quickly.⁷¹ If this mechanism is used, we would most likely shorten the duration and/or intervals between bidding rounds where there are relatively few licenses to be auctioned, where the value of the licenses is relatively low or in early rounds to speed the auction process. Where license values are expected to be high or where large numbers of licenses are being auctioned, we propose increasing the duration and/or intervals between bidding rounds.⁷² We would announce by Public Notice, and may vary by announcement during an auction, the duration and intervals between bidding rounds. We seek comment on these proposals.

41. Activity Rules. In order to ensure that simultaneous auctions with simultaneous stopping rules close within a reasonable period, we believe that it may be necessary to impose an activity rule to prevent bidders from waiting until the end of the auction before participating. Because simultaneous stopping rules generally keep all markets open as long as anyone wishes to bid, they also create an incentive for bidders to hold back until prices approach equilibrium before making a bid and risking additional payment for withdrawing.⁷³ As noted above, this could lead to very long auctions. An activity rule is less important when markets close one-by-one because failure to participate in any given round may result in losing the opportunity to bid at all, if that round turns out to be the last.

42. In the Competitive Bidding Second Report and Order, we adopted the Milgrom-Wilson activity rule as our preferred activity rule where a simultaneous stopping rule is used.⁷⁴ We have subsequently adopted or proposed the Milgrom-Wilson rule in each of our

⁷⁰ Id. at 2955 (¶ 35).

⁷¹ Id.

⁷² Id.

⁷³ Id. at 2955 (¶ 36); see also 900 MHz Second Report and Order at ¶ 83.

⁷⁴ Competitive Bidding Second Report and Order, 9 FCC Rcd 2348, 2371-2373 (¶¶ 135-145).

simultaneous multiple round auctions.⁷⁵ The Milgrom-Wilson approach encourages bidders to participate in early rounds by limiting their maximum participation to some multiple of their minimum participation level.⁷⁶ Bidders are required to declare their maximum eligibility in terms of MHz-pops, and make an upfront payment equal to a dollar amount per MHz-pops (e.g., \$0.02 per MHz-pops).⁷⁷ That is, bidders will be limited to bidding on licenses encompassing no more than the number of MHz-pops covered by their upfront payment.⁷⁸ Licenses on which a bidder is the high bidder from the previous round, as well as licenses on which a new valid bid is placed, count toward this MHz-pops limit. Under this approach, bidders will have the flexibility to shift their bids among any licenses for which they have applied so long as the total MHz-pops encompassed by those licenses does not exceed the number for which they made an upfront payment. Moreover, bidders will be able to secure the freedom to participate at whatever level they deem appropriate by making a sufficient upfront payment. To preserve their maximum eligibility, however, bidders would be required to maintain some minimum activity level during each round of the auction.

43. Under the Milgrom-Wilson proposal, the minimum activity level, measured as a fraction of the self declared maximum eligibility, will increase during the course of the auction. For this purpose, Milgrom and Wilson divide the auction into three stages.⁷⁹ During the first stage of the auction, a bidder is required to be active on licenses encompassing one-third of the MHz-pops for which it is eligible. The penalty for falling below that activity level is a reduction in eligibility.⁸⁰ At this stage, bidders would lose three MHz-pops in maximum eligibility for each MHz-pops below the minimum required activity level. In other words, each bidder would retain eligibility for three times the MHz-pops for which it is an

⁷⁵ See 900 MHz Second Report and Order at ¶ 88-90; see also Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2955-2957 (¶¶ 36-40); see also MMDS Report and Order at ¶¶ 114-123.

⁷⁶ See, e.g., Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2958 (¶ 37).

⁷⁷ See discussion of upfront payments at ¶ 54, infra.

⁷⁸ Id.

⁷⁹ The auction would move from stage one to stage two when, after three rounds of bidding, the high bid has changed on five percent or fewer of the licenses (measured in terms of MHz-pops) being auctioned. Stage three would begin when the high bid has changed on two percent or fewer licenses (measured in terms of MHz-pops) over three rounds. We retain the discretion to modify this method and announce such modification by Public Notice. See, e.g., Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2956 n.16.

⁸⁰ See, e.g., Competitive Bidding Third Report and Order, 9 FCC Rcd 2941, 2956 n.16.

active bidder, up to the MHz-pops covered by the bidder's upfront payment.⁸¹ In the second stage, bidders are required to be active on two-thirds of the MHz-pops for which they are eligible. The penalty for falling below that activity level would be a loss of 1.5 MHz-pops in eligibility for each MHz-pops below the minimum required activity level. In the third stage, bidders are required to be active on licenses encompassing all of the MHz-pops for which they are eligible.⁸² The penalty for falling below that activity level is a loss of one MHz-pops in eligibility for each MHz-pops below the minimum required activity level. Each bidder thus retains eligibility equal to its current activity level (1 times the MHz-pops for which it is an active bidder). We seek comment on this proposed activity rule.

44. Finally, to avoid the consequences of clerical errors and to compensate for unusual circumstances that might delay a bidder's bid preparation or submission on a particular day, we propose permitting each bidder to request and automatically receive a waiver of the activity rule once every three rounds.⁸³ In the Competitive Bidding Fourth Memorandum Opinion and Order, we stated that the Commission retained the discretion to modify the method and timing of submitting waivers and to allow for two types of waivers - "proactive" and "automatic."⁸⁴ As explained therein, proactive waivers invoked in a round in which there are no new valid bids will keep an auction open, while an automatic waiver submitted in a round in which no other bidding activity occurs will not keep an auction open.⁸⁵ Proactive waivers are submitted by the bidder, while automatic waivers would be submitted automatically for a bidder whenever a bidder's eligibility would be reduced because of insufficient bidding activity and a waiver is available unless the bidder specifically chooses not to have the automatic waiver apply.⁸⁶ Automatic activity rule waivers would be automatically applied by the bidding system in any round where a bidder's activity is below the requested activity level as long as the bidder has waivers remaining.

45. Under this proposal, we would announce by Public Notice how many waivers bidders would receive. A waiver would permit a bidder to maintain its eligibility at the same level as in the round for which the waiver is applied. A waiver, however, could not be used to correct an error in the amount bid. This would ensure that bidders are not arbitrarily

⁸¹ Id. at ¶ 38.

⁸² Id.

⁸³ Id.

⁸⁴ Competitive Bidding Fourth Memorandum Opinion and Order, 9 FCC Rcd 6858, 6861 (¶ 15).

⁸⁵ Id.

⁸⁶ Id.

penalized by having their eligibility reduced due to an accidental act or circumstances not under the bidder's control. We seek comments on these proposals.

46. We tentatively conclude that the Milgrom-Wilson approach will best achieve our goals of affording bidders flexibility to pursue back up strategies, while at the same time ensuring that simultaneous auctions are concluded within a reasonable period of time. Accordingly, we seek comment on imposing such an activity rule in conjunction with a simultaneous stopping rule to award 37 GHz licenses. We also seek comment on whether to use a simplified waiver procedure, if we adopt an activity rule for 37 GHz licenses. For example, bidders might be permitted five automatic waivers from the activity rule during the course of an auction.⁸⁷ If we adopt an activity rule of auctioning 37 GHz licenses, we propose to announce by Public Notice before each auction the activity rule that will be employed in that particular auction.⁸⁸ We seek comment on these issues.

47. While we are proposing the adoption of the Milgrom-Wilson activity rule by this Notice, we also retain the discretion to use an alternative activity rule for 37 GHz if we determine that the Milgrom-Wilson rule is too complicated or costly to administer. Any such change would be announced by Public Notice before commencement of the auction. We seek comment on this proposal.

48. Duration of Bidding Rounds. We propose to reserve the discretion to vary the duration of bidding rounds or the interval at which bids are accepted (e.g., run more than one round per day) in order to move the auction toward closure more quickly.⁸⁹ Under this proposal, we would announce any changes to the duration of and intervals between bidding rounds either by public notice prior to the auction or by announcement during the auction. We seek comment on this issue.

⁸⁷ Id. at ¶ 40.

⁸⁸ Our rules allow us to make any such modifications to activity rules as appropriate for a particular auction. We here propose to retain the discretion to choose among the following other activity rules on a case-by-case basis: (1) a Milgrom-Wilson rule with one or two stages rather than three, (2) a requirement that bidders be active on a single license in each round, (3) a rule that a bidder's activity level remain within a single range throughout the auction (i.e., remain active on some percentage of the total MHz-pops covered by the upfront payment), (4) a rule that replaces the maximum allowed bidding levels in the Milgrom-Wilson rule with a bidding premium for exceeding those maximums, or (5) a combination of the foregoing rules. See Competitive Bidding Third Report and Order at ¶¶ 40-41.

⁸⁹ See, e.g., 900 MHz Second Report and Order at ¶ 86.

2. Procedural and Payment Issues
a. Pre-Auction Application Procedures

49. In this section we propose general competitive bidding rules and procedures. These rules are structured to ensure that bidders and licensees are qualified and will be able to construct systems quickly and offer service to the public.⁹⁰ By ensuring that bidders and license winners are serious, qualified applicants, these rules will minimize the need to re-auction licenses and will prevent delays in the provision of 37 GHz service and, thus, of PCS service to the public. In addition, we propose adopting general procedural and processing rules based on rules for other auctionable services, such as those contained in Part 24 of the Commission's Rules for PCS.⁹¹

50. In the Competitive Bidding Second Report and Order, we established general competitive bidding rules and procedures that may be modified on a service-specific basis.⁹² We propose following the procedural and payment rules established in the Competitive Bidding Second Report and Order with certain minor modifications designed to address particular characteristics of the 37 GHz service.

51. Short Form Applications. In the Competitive Bidding Second Report and Order, we determined that we should require only a short-form application prior to competitive bidding, and that only winning bidders should be required to submit a long-form license application after the auction.⁹³ We have previously determined that such a procedure would fulfill the statutory requirements and objectives and adequately protect the public interest.⁹⁴ Accordingly, we propose to extend the application of these rules to the competitive bidding process for 37 GHz licenses.

52. We propose that, before each 37 GHz auction, the Wireless Telecommunications Bureau will release an initial Public Notice announcing the auction. These initial Public Notices would specify the licenses to be auctioned and the time, place and method of competitive bidding to be used, including applicable bid submission procedures, bid withdrawal procedures and payments, stopping rules and activity rules and other important

⁹⁰ See, e.g., Competitive Bidding Third Report and Order at ¶ 43; see also 900 MHz Second Report and Order at ¶ 97.

⁹¹ See Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, Third Report and Order, 9 FCC Rcd 7988, 8026 (¶ 67) (1994).

⁹² See 47 C.F.R. Part 1, Subpart Q.

⁹³ Id.

⁹⁴ See, e.g., Competitive Bidding Third Report and Order at ¶ 43.

information.⁹⁵ These initial Public Notices will also specify the filing window for short-form applications.

53. Amendments and Modifications. Under this proposal, all bidders would be required to submit short-form applications on FCC form 175 by the date specified in the applicable initial Public Notice. If only one application that is acceptable for filing for a particular license is received, and thus there is no mutual exclusivity, we would by Public Notice cancel the auction for this license and establish a date for the filing of a long-form application, the acceptance of which will trigger the procedures permitting petitions to deny.⁹⁶ To encourage maximum bidder participation, we propose to provide applicants with an opportunity to correct minor defects in their short-form applications prior to the auction. On the date set for submission of corrected applications, applicants that on their own discover minor errors in their applications (e.g., typographical errors, incorrect license designations) also would be permitted to file corrected applications. Recently, we waived the ex parte rules as they applied to the submission of amended short-form applications for the A and B blocks of the broadband PCS auctions, to maximize applicants' opportunities to seek Commission staff advice on making such amendments.⁹⁷ We propose to apply the same principles to the 37 GHz auctions. Under our proposal, applicants would not be permitted to make any major modifications to their applications, including changes in markets and changes in control of the applicant, or additions of other bidders into the bidding consortia, until after the auction. Applicants could modify their short-form applications to reflect formation of consortia or changes in ownership at any time before or during an auction, provided such changes would not result in a change in control of the applicant, and provided that the parties forming consortia or entering into ownership agreements have not applied for licenses in any of the same geographic license areas.⁹⁸ In addition, applications that are not signed would be dismissed as unacceptable. After reviewing the corrected applications, a Public Notice would be released, announcing the names of all applicants whose applications have been accepted for filing. Applicants identified in the Public Notice would then be required to submit the full amount of their upfront payment (defined below in ¶¶ 54-55) to the Commission's lock-box bank by the date specified in the Public Notice, which generally will be no later than 14 days before the scheduled auction. After we receive from our lock-box bank the names of all applicants who have submitted timely upfront payments, we would then issue a Public Notice announcing the names of all applicants that have been determined to be qualified to bid. An

⁹⁵ Id. at ¶ 42.

⁹⁶ Id. at ¶ 43; see also 900 MHz Second Report and Order at ¶¶ 105-106.

⁹⁷ Commission Announces that Mutually Exclusive "Short Form" Applications (Form 175) to Participate in Competitive Bidding Process ("Auctions") are Treated as Exempt for Ex Parte Purposes, Public Notice, 9 FCC Rcd 6760 (1994).

⁹⁸ Competitive Bidding Second Memorandum Opinion and Order at ¶ 52; Erratum, Mimeo No. 50228 (released: October 19, 1994).

applicant who fails to submit a sufficient upfront payment to qualify it to bid on any license being auctioned will not be identified on this Public Notice as a qualified bidder. Each applicant listed on this fourth Public Notice will be issued a bidder identification number and further information and instructions regarding the auction procedures. We seek comments on these proposals.

b. Upfront Payment

54. We propose to require all auction participants to tender in advance to the Commission a substantial upfront payment as a condition of bidding in order to ensure that only serious, qualified bidders participate in auctions and to ensure payment of an additional assessment (discussed at ¶¶ 56-60, infra) in the event of bid withdrawal or default. The standard upfront payment formula is \$2,500 or \$0.02 per pop per MHz for the largest combination of MHz-pops, whichever is greater.⁹⁹ This upfront payment calculation will define the upper bound of MHz-pops on which a bidder will be permitted to bid in any round, and so should be calculated by bidders to reflect the maximum MHz-pops from any combination of licenses on which they may want to bid in a single round.¹⁰⁰ We believe that this formula is appropriate for 37 GHz services. Using this formula will provide bidders with the flexibility to change their strategy during an auction and to bid on a larger number of smaller licenses or a smaller number of larger licenses, so long as the total MHz-pops combination does not exceed that amount covered by the upfront payment. If licenses covering the nation are being auctioned simultaneously, a bidder would not be required to file an upfront payment representing national coverage unless it intends to bid on licenses covering the entire nation in any single bidding round. Under this proposal, we would announce the upfront payment amount for each license in a Public Notice issued prior to the auction. We seek comments on these proposals.

55. Upfront payments generally will be due no later than 14 days before a scheduled auction.¹⁰¹ This period should be sufficient to allow us sufficient time to process upfront payment data and release a Public Notice listing all qualified bidders. The specific procedures to be followed in the tendering and processing of upfront payments are set forth in Section 1.2106 of the Commission's Rules.

⁹⁹ Competitive Bidding Second Report and Order at ¶ 171.

¹⁰⁰ As discussed infra, however, we would retain the flexibility to consider using a simpler payment requirement if circumstances warrant. The upfront payment amount would be announced by Public Notice before each auction.

¹⁰¹ Competitive Bidding Second Report and Order at ¶ 171.

c. Down Payment and Full Payment

56. In the Competitive Bidding Second Report and Order, we established a 20 percent down payment requirement for winning bidders to discourage default between the auction and licensing and to ensure payment of the additional assessment if such default occurs.¹⁰² We concluded that a 20 percent down payment was appropriate to ensure that auction winners have the necessary financial capabilities to complete payment for the license and to pay for the costs of constructing a system, while not being so onerous as to hinder growth or diminish access.¹⁰³ We also determined that this amount was appropriate for the broadband PCS auctions.¹⁰⁴ We believe that the reasoning employed in those Orders is equally applicable to the 37 GHz service. Thus, we tentatively conclude that, with the exception of small businesses eligible for installment payments (as proposed at ¶¶ 82-86, infra), winning bidders in 37 GHz auctions must supplement their upfront payments with a down payment sufficient to bring their total deposits up to 20 percent of their winning bid(s). Under this proposal, if the upfront payment already tendered by a winning bidder, after deducting any bid withdrawal and default payments due, amounts to 20 percent or more of its winning bids, no additional deposit would be required. If the upfront payment amount on deposit is greater than 20 percent of the winning bid amount after deducting any bid withdrawal and default payments due, the additional monies would be refunded. If a bidder has withdrawn a bid or defaulted but the amount of the payment cannot yet be determined, the bidder would be required to make a deposit of 20 percent of the amount bid on such licenses.¹⁰⁵ When it becomes possible to calculate and assess the default payment, any excess deposit would be refunded. Upfront payments would be applied to such deposits and to bid withdrawal and default payments due before being applied toward the bidder's down payment on licenses the bidder has won and seeks to acquire.¹⁰⁶ We seek comment on these proposals.

57. We propose to require winning bidders to submit the required down payment by cashier's check or wire transfer to our lock-box bank by a date to be specified by Public Notice, generally within five (5) business days following the close of bidding.¹⁰⁷ All auction winners generally would be required to make full payment of the balance of their winning bids within five (5) business days following Public Notice that the license is ready for grant.

¹⁰² Id. at ¶ 190.

¹⁰³ Id.

¹⁰⁴ See Competitive Bidding Fifth Report and Order at ¶ 73.

¹⁰⁵ See, e.g., Competitive Bidding Third Report and Order at ¶ 49.

¹⁰⁶ Id. at ¶ 49.

¹⁰⁷ Additionally, we propose adopting an installment payment option for small businesses that are winning bidders in the 37 GHz auction. See ¶¶ 81-85, infra.

Under this proposal, we would grant the license within ten (10) business days after receiving full payment.¹⁰⁸ We seek comment on this proposal.

d. Bid Withdrawal, Default and Disqualification

58. In either a sequential or simultaneous auction, it is critically important that potential bidders understand that there will be a substantial payment assessed if they withdraw a high bid, are found not to be qualified to hold licenses or are unable to pay a balance due.¹⁰⁹ We therefore propose the following withdrawal, default and disqualification rules. Any bidder who withdraws a high bid during an auction before we declare the bidding closed, or defaults by failing to remit the required down payment within the prescribed time, would be required to reimburse us in the amount of the difference between its high bid and the amount of the winning bid the next time the license is offered by us, if the subsequent winning bid is lower.¹¹⁰ After bidding closes, a defaulting auction winner would be assessed an additional payment of three percent of the subsequent winning bid or three percent of the amount of the defaulting bid, whichever is less.¹¹¹ The additional three percent payment is designed to encourage bidders desiring to withdraw their bids, to do so before bidding ceases. This additional payment would also apply if an auction winner were disqualified or failed to remit the balance of its winning bid after having made the required down payment. We would hold deposits made by defaulting or disqualified auction winners until full payment of the additional assessment.¹¹² We believe that these payments will discourage default and ensure that bidders have adequate financing and that they meet all eligibility and qualification requirements. A defaulting auction winner is ineligible to participate in any reduction which

¹⁰⁸ See, e.g., Competitive Bidding Third Report and Order at ¶ 51.

¹⁰⁹ Id. at ¶ 49.

¹¹⁰ In the unlikely event that there is more than one bid withdrawal on the same license, we would hold each withdrawing bidder responsible only for the difference between its withdrawn bid and the amount of the winning bid the next time the license is offered by us. This procedure would ensure that each bidder who withdraws is responsible for its bid.

¹¹¹ See 47 C.F.R. §§ 1.2104 (g) and 1.2109. If a license is re-offered by auction, the "winning bid" refers to the high bid in the auction in which the license is re-offered. If a license which is the subject of withdrawal or default is instead offered to the highest losing bidders in the initial auction, the "winning bid" refers to the bid of the highest bidder who accepts the offer. Losing bidders would not be required to accept the offer, *i.e.*, they may decline without penalty. We wish to encourage losing bidders in simultaneous multiple round auctions to bid on other licenses, and therefore would not hold them to their losing bids on a license for which a bidder has withdrawn a bid or on which a bidder has defaulted.

¹¹² In rare cases in which it would be inequitable to retain a down payment, we will entertain requests for waiver of this provision.

includes the license on which it defaulted. In addition, if a default or disqualification involves gross misconduct, misrepresentation or bad faith by an applicant, we would also retain the ability to declare the applicant and its principals ineligible to bid in future auctions, and would be able to take any other action that it deemed necessary, including institution of proceedings to revoke any existing licenses held by the applicant. We seek comments on these proposed default rules.

59. In the event that an auction winner defaults or is otherwise disqualified after an auction is closed, an issue arises as to whether we should hold a new auction or simply offer the license to the second-highest bidder. We believe that, as a general rule, when an auction winner defaults or is otherwise disqualified after having made the required down payment, the best course of action is to re-auction the license either to existing or new applicants.¹¹³ Although we recognize that this may cause a brief delay in the initiation of service to the public, during the time between the original auction and the disqualification circumstances may have changed so significantly as to alter the value of the license to auction participants as well as to parties who did not participate.¹¹⁴ In this situation, we believe that awarding licenses to the parties that value them most highly can best be assured through a re-auction.¹¹⁵ However, if the default occurs within five (5) business days after bidding has closed, we would retain the discretion to offer the license to the second highest bidder at its final bid level, or if that bidder declines the offer, to offer the license to other bidders (in descending order of their bid amounts) at their final bid levels. If only a small number of relatively low value licenses are to be re-auctioned, we may choose to offer the license to the highest losing bidders since the cost of running an auction may not exceed the benefits. We invite comments on these proposals.

60. If a new auction becomes necessary because of default or disqualification more than five (5) business days after bidding has ended, we propose allowing the Commission to afford new parties an opportunity to file applications because so much time is likely to have passed that different parties may be interested in bidding and existing applicants may have different valuations of the license. One of our primary goals in conducting auctions is to assure that all seriously interested bidders are in the pool of qualified bidders at any re-auction.¹¹⁶ We believe that achievement of this goal outweighs the short delay that we recognize may result from allowing new applications in a re-auction. Indeed, if we were not to allow new applicants in a re-auction, interested parties may be forced into an after-market transaction to obtain the license, which would itself delay service to the public and deny

¹¹³ See, e.g., Competitive Bidding Third Report and Order at ¶¶ 51-52.

¹¹⁴ Id.

¹¹⁵ Id.

¹¹⁶ See, e.g., Competitive Bidding Third Report and Order at ¶¶ 51-52.

recovery by the government of a reasonable portion of the value of the spectrum. We seek comment on this proposal.

3. Regulatory Safeguards

a. Transfer Disclosures and Anti-Trafficking Provisions

61. The Communications Act, as amended by the 1993 Budget Act, directs us to "require such transfer disclosures and anti-trafficking restrictions and payment schedules as may be necessary to prevent unjust enrichment as a result of the methods employed to issue licenses and permits." 47 U.S.C. § 309(j)(4)(E). In the Competitive Bidding Second Report and Order, we adopted safeguards designed to ensure that the requirements of Section 309(j)(4)(E) are satisfied.¹¹⁷ We propose applying specific rules governing unjust enrichment by small businesses, which are discussed below in ¶¶ 91-93. In addition, we propose applying the transfer disclosure requirements contained in Section 1.2111(a) of our rules to all 37 GHz licenses obtained through the competitive bidding process. Generally, any applicant transferring any of its licenses within three years after the initial grant of that license will be required to file, together with its transfer application, the associated contracts for sale, option agreements, management agreements, and all other documents disclosing the total consideration received in return for the transfer of its license. We propose giving particular scrutiny to auction winners who have not yet begun commercial service and who seek approval for a transfer of control or assignment of their licenses after the initial license grant, in order to determine if any unforeseen problems relating to unjust enrichment have arisen outside the small business context. In addition, this reporting requirement will provide us with valuable information that will enable us to evaluate how well the various auction methods have achieved our objectives. We seek comment on this proposal.

b. Rules Prohibiting Collusion

62. In the Competitive Bidding Second Report and Order we adopted special rules prohibiting collusive conduct in the context of competitive bidding.¹¹⁸ We indicated that such rules would serve the objectives of the Budget Act by preventing parties, especially the largest firms, from agreeing in advance to bidding strategies that divide the market according to their strategic interests and disadvantage other bidders. We propose applying these rules to the 37 GHz band. The rule prohibits bidders from communicating with one another after short-form applications have been filed regarding the substance of their bids or bidding strategies, and also prohibits bidders from entering into consortium arrangements or joint bidding agreements after the deadline for short-form applications has passed.¹¹⁹ In the Competitive Bidding Second Memorandum Opinion and Order, we modified the rule so that bidders who have not

¹¹⁷ Competitive Bidding Second Report and Order at ¶¶ 210-226, 258-265.

¹¹⁸ See 47 C.F.R. § 1.2105 (c).

¹¹⁹ See 47 C.F.R. § 1.2015(c)(1).

filed Form 175 applications for licenses in any of the same geographic license areas may enter into such discussions, consortia, or arrangements, or add equity partners, during the course of an auction, because of the relatively low risk of anticompetitive conduct among bidders that have not applied for licenses in any of the same geographic areas.¹²⁰ Further, in the Competitive Bidding Fourth Memorandum Opinion and Order, we noted that communications among bidders concerning matters unrelated to the license auctions would be permitted.¹²¹ We seek comment on this proposal.

63. In addition, bidders would be required to identify on their Form 175 applications all parties with whom they have entered into any consortium arrangements, joint ventures, partnerships or other agreements or understandings which relate to the competitive bidding process.¹²² Bidders will also be required to certify that they have not entered and will not enter into any explicit or implicit agreements, arrangements or understandings with any parties, other than those identified, regarding the amount of their bid, bidding strategies or the particular properties on which they will or will not bid. After the short-form applications are filed and prior to the time that the winning bidder has made its required down payment, all bidders will be prohibited from cooperating, collaborating, discussing or disclosing in any manner the substance of their bids or bidding strategies with other bidders, unless such bidders are members of a bidding consortium or other joint bidding arrangement identified on the bidder's short-form application.¹²³ We seek comment on this proposal.

64. We also propose requiring winning bidders to attach as an exhibit to the long form application a detailed explanation of the terms and conditions and parties involved in any bidding consortia, joint venture, partnership or other agreement or arrangement they had entered into relating to the competitive bidding process prior to the close of bidding.¹²⁴ All such arrangements must have been entered into prior to the filing of short-form applications. Where specific instances of collusion in the competitive bidding process are alleged during the petition to deny process, we will conduct an investigation or refer such complaints to the

¹²⁰ 47 C.F.R. § 1.2105(c)(3); Competitive Bidding Second Memorandum Opinion and Order, 9 FCC Rcd at 7254, Erratum, 1994 WL 575828 (October 19, 1994).

¹²¹ Competitive Bidding Fourth Memorandum Opinion and Order at ¶ 59. See also Letter to R. Michael Senkowski from Rosalind K. Allen, Acting Chief, Commercial Radio Division, rel. Dec. 1, 1994 (discussions that indirectly provide information that affects bidding strategy are also precluded by anti-collusion rules).

¹²² See, e.g., 900 MHz Second Report and Order at ¶ 95; see also Competitive Bidding Third Report and Order at ¶ 64.

¹²³ Id.

¹²⁴ See, e.g., 900 MHz Second Report and Order at ¶ 96; see also Competitive Bidding Third Report and Order at ¶ 65.

United States Department of Justice for investigation.¹²⁵ Bidders who are found to have violated the antitrust laws, in addition to any penalties they incur under the antitrust laws, or who are found to have violated the Commission's Rules in connection with participation in the auction process may be subject to a variety of sanctions, including forfeiture of their down payment or their full bid amount, revocation of their license(s), and may be prohibited from participating in future auctions. We seek comment on the applicability of these rules to licenses in the 37 GHz band.

4. Designated Entity Provisions

a. Introduction

65. The Communications Act, as amended by the 1993 Budget Act, directs us to "ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services."¹²⁶ The statute requires us to "consider the use of tax certificates, bidding preferences, and other procedures" in order to achieve this congressional goal. In addition, Section 309(j)(3)(B) provides that in establishing eligibility criteria and bidding methodologies we shall promote "economic opportunity and competition . . . by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women."¹²⁷ Finally, Section 309(j)(4)(A) provides that to promote these objectives we shall consider alternative payment schedules including lump sums or guaranteed installment payments.

66. In instructing us to ensure the opportunity for these "designated entities" (DEs) to participate in auctions and spectrum-based services, Congress was well aware of the problems that they would have in competing against large, well-capitalized companies in auctions and the difficulties they encounter in obtaining capital. For example, the legislative history accompanying our grant of auction authority states generally that the Commission's regulations "must promote economic opportunity and competition," and "[t]he Commission will realize these goals by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses and businesses owned by members of minority groups and women."¹²⁸ The House Report states that the House Committee was concerned that, "unless the Commission is sensitive to the need to maintain opportunities for small businesses, competitive bidding could result in a significant increase in

¹²⁵ Id.

¹²⁶ 47 U.S.C. § 309(j)(4)(D).

¹²⁷ 47 U.S.C. § 309(j)(3)(B).

¹²⁸ House Report at 254.

concentration in the telecommunications industries."¹²⁹ More specifically, the House Committee was concerned that adoption of competitive bidding should not have the effect of "excluding" small businesses from our licensing procedures, and anticipated that we would adopt regulations to ensure that small businesses would "continue to have opportunities to become licensees."¹³⁰

67. Consistent with Congress's concern that auctions not operate to exclude small businesses, the provisions relating to installment payments were clearly intended to assist small businesses. The House Report states that these related provisions were drafted to "ensure that all small businesses will be covered by the Commission's regulations."¹³¹ It also states that the provisions in section 309(j)(4)(A) relating to installment payments were intended to promote economic opportunity by ensuring that competitive bidding does not inadvertently favor incumbents with "deep pockets" "over new companies or start-ups."¹³²

68. In addition, with regard to access to capital, Congress made specific findings in the Small Business Credit and Business Opportunity Enhancement Act of 1992, that "small business concerns, which represent higher degrees of risk in financial markets than do large businesses, are experiencing increased difficulties in obtaining credit."¹³³ As a result of these difficulties, Congress resolved to consider carefully legislation and regulations "to ensure that small business concerns are not negatively impacted" and to give priority to passage of "legislation and regulations that enhance the viability of small business concerns."¹³⁴

69. In our initial implementation of Section 309(j) of the Communications Act, we established in the Competitive Bidding Second Report and Order eligibility criteria and general rules that would govern the special measures for DEs, including small businesses. We also identified several measures, including installment payments, spectrum set-asides, bidding credits and tax certificates, from which we could choose in establishing rules for auctionable spectrum-based services. We stated that we would decide whether and how to use these special provisions, or others, when we developed specific competitive bidding rules for particular services. In addition, we set forth rules designed to prevent unjust enrichment by

¹²⁹ Id.

¹³⁰ Id. at 255.

¹³¹ Id.

¹³² Id.

¹³³ Small Business Credit and Business Opportunity Enhancement Act of 1992, § 331(a)(3), Pub. Law 102-366, Sept. 4, 1992.

¹³⁴ Id. at § 331(b)(2),(3).

DEs who transfer ownership in licenses obtained through the use of these special measures or who otherwise lose their DE status.

70. We have employed a wide range of special provisions and eligibility criteria designed to meet the statutory objectives of providing opportunities to DEs in other spectrum-based services. For instance, minority-owned and women-owned businesses in the nationwide narrowband PCS auction received a 25 percent bidding credit on certain channels;¹³⁵ in the regional narrowband PCS auction women-owned and minority-owned businesses received a 40 percent bidding credit on certain channels and small businesses were eligible for installment payments on all channels;¹³⁶ in the broadband PCS auction, we established separate entrepreneurs' blocks with varying degrees of installment payments.¹³⁷ In the multi-channel multipoint distribution service (MMDS), we established bidding credits and installment payments for small businesses.¹³⁸ The measures adopted thus far for each service were established after closely examining the specific characteristics of the service and determining whether any particular barriers to accessing capital stood in the way of DE opportunities. After examining the record in the competitive bidding proceeding in PP Docket 93-253, we established provisions necessary to enable small businesses to overcome the barriers to accessing capital in each particular service. Moreover, the measures we adopted also were designed to increase the likelihood that small businesses who win licenses in the auctions become strong competitors in the provision of wireless services.

71. In response to many comments explaining how we should implement Congress's mandate, we adopted several rules designed to encourage the participation of women and minorities in broadband PCS by addressing greater difficulties these groups experience in accessing capital. We analyzed these special provisions for minorities and women under the

¹³⁵ Competitive Bidding Third Report and Order at ¶ 72.

¹³⁶ Id. at ¶ 87. See also Competitive Bidding Third Memorandum Opinion and Order and Further Notice of Proposed Rulemaking at ¶¶ 58, 92-97.

¹³⁷ Competitive Bidding Fifth Memorandum Opinion and Order at ¶ 103; see also Implementation of Section 309(j) of the Communications Act - Competitive Bidding, Amendment of the Commission's Cellular PCS Cross-Ownership Rule, and Implementation of Sections 3(n) and 332 of the Communications Act Regulatory Treatment of Mobile Services, PP Docket No. 93-253, GN Docket No. 90-314, and GN Docket No. 93-252, Further Notice of Proposed Rule Making, FCC 95-263, released June 23, 1995, (Competitive Bidding Further Notice of Proposed Rule Making); Sixth Report and Order, FCC 95-301, released July 18, 1995.

¹³⁸ MMDS Report and Order at ¶¶ 182-189.

"intermediate scrutiny" standard established in Metro Broadcasting, Inc. v. FCC, 497 U.S. 547, 564-565 (1990) and determined that they were constitutional.¹³⁹

72. However, on June 12, 1995, the Supreme Court decided in Adarand Constructors, Inc. v. Peña¹⁴⁰ that "all racial classifications . . . must be analyzed by a reviewing court under strict scrutiny."¹⁴¹ The Court ruled that any federal program that makes distinctions on the basis of race must serve a compelling governmental interest and must be narrowly tailored to serve that interest.¹⁴²

73. The holding in Adarand would apply to any proposal to incorporate race-based measures into our 37 GHz auction rules. At this time, we may not have developed a record sufficient to sustain race-based measures in the 37 GHz band based on the standard established by Adarand.¹⁴³ We therefore propose to limit special provisions initially to small businesses in the 37 GHz band. As discussed below, we propose to define small business in a way that would increase the likelihood of women- and minority-owned businesses establishing eligibility for special provisions. We do, however, believe that race-based measures could survive strict scrutiny from the courts. Moreover, we do not concede that any of our auction rules are unconstitutional. We simply believe that auction rules we develop must now be evaluated under a stricter constitutional standard than had been previously relied upon, and that at a minimum, this requires us to build a record concerning the participation of minorities and women in spectrum-based services before we adopt race- and gender-based measures.

74. Adarand thus introduces an additional level of complexity in implementing Congress' mandate to ensure that businesses owned by minorities and women are provided "the opportunity to participate in the provisions of spectrum-based services."¹⁴⁴ Although Adarand did not address gender-based preferences, we have included them here in an effort to

¹³⁹ See Competitive Bidding Fifth Report and Order at ¶ 9.

¹⁴⁰ 63 U.S.W.L., No. 93-1841 (U.S. June 12, 1995).

¹⁴¹ 63 U.S.W.L. at 4530. The Court overruled Metro Broadcasting to the extent that it held that remedial programs based on racial classifications should be reviewed using an intermediate scrutiny test.

¹⁴² Id. at 4533.

¹⁴³ See, e.g., Competitive Bidding Further Notice of Proposed Rule Making, FCC 95-263 (June 23, 1995).

¹⁴⁴ 47 U.S.C. § 309(j)(4)(D).

seek the broadest possible comment.¹⁴⁵ We welcome comment as to the appropriateness of our approach. Accordingly, we seek comment on how we can best promote opportunities for businesses owned by minorities and women in the 37 GHz band in light of Adarand. We seek the broadest possible comments including, but not limited to, responses to the following questions:

- Do we have a compelling interest in establishing opportunity-enhancing measures in the 37 GHz band specifically for minority- and women-owned businesses? If so, what is that compelling interest? Are there characteristics specific to the 37 GHz band that demonstrate that race- and/or gender-based measures are needed to satisfy the mandate of 47 U.S.C. § 309(j)(3)(A)?
- What evidence (statistical, documentary, anecdotal or otherwise) can be marshalled to support the proposed compelling interest?
- What techniques could we employ that would be narrowly tailored to further the proposed compelling interest? Would such techniques include bidding credits and installment payments? Are race-conscious or gender-conscious measures necessary, or are there race-or gender-neutral measures that would be effective?

Commenters are encouraged to provide us as much evidence as possible with regard to past discrimination, continuing discrimination, discrimination in access to capital, underrepresentation and other significant barriers facing businesses owned by minorities and women in obtaining licenses in the 37 GHz band and in licensed communications services generally.

75. As in other auctionable services, we fully intend in the 37 GHz band to meet the statutory objectives of promoting economic opportunity and competition, of avoiding excessive concentration of licenses, and of ensuring access to new and innovative technologies by disseminating licenses among a wide variety of applicants, including small businesses. Accordingly, in balancing the congressional objectives set forth in the auction statute, we tentatively conclude that bidding credits, reduced down payments, and installment payments should be made available to small businesses on all 37 GHz channel blocks.

76. Our specific proposals, discussed more fully below, are similar to DE provisions adopted for GWCS in the 4660-4685 MHz band.¹⁴⁶ We believe that the 37 GHz band has several similarities to GWCS, such as relatively small geographic areas, no eligibility limitations, uniform channel blocks, and the potential for a variety of different uses.

¹⁴⁵ See Telephone Electronic Corp. v. FCC, No. 95-1015 (D.C. Cir. March 15, 1995)(discussing Commission's rules establishing both gender- and race-specific preferences for Broadband PCS.) See also Lamprecht v. FCC, 958 F.2d 382 (D.C. Cir. 1992).

¹⁴⁶ See GWCS Second Report and Order, 60 Fed. Reg. 40712 (August 9, 1995).

Although the 37 GHz band may be used for backhaul and backbone communications links for broadband PCS, our proposed rules do not require such use. In addition, we have proposed uniform channel blocks and uniformly small geographic areas for the 37 GHz band. Also, many more licenses will be available in the 37 GHz band than were available for broadband PCS. We believe that these factors will reduce the capital costs of obtaining 37 GHz licenses, which should benefit DEs. Therefore, we are proposing moderate special provisions for small business. We seek comment on our proposal to base DE provisions for 37 GHz licenses on those adopted for GWCS. In particular, commenters should address whether DE provisions adopted for broadband PCS would be more appropriate because this spectrum may be used in support of PCS service.

b. Bidding Credits

77. Bidding credits allow eligible small businesses to receive a payment discount for their winning bid in an auction. In the Competitive Bidding Second Report and Order, we determined that competitive bidding rules applicable to individual services would specify the DEs¹⁴⁷ eligible for bidding credits and the amounts of the available bidding credits for that particular service.¹⁴⁸

78. We propose a 10 percent bidding credit for all small businesses. As discussed below, we are also proposing installment payments for small business bidders and the small BTA geographic licensing areas. We believe that these proposals will substantially reduce the capital costs of acquiring 37 GHz licenses and providing service. Such changes should be of particular benefit to small businesses and rural telcos. In our judgment, these and other provisions of the licensing and auction rules should ensure that small businesses will be able to participate effectively in obtaining 37 GHz licenses, whether or not those licenses are auctioned.

79. We remain concerned that small businesses, including those owned by women and minorities, will find it difficult to obtain the capital to compete effectively in 37 GHz auctions against large corporations and small telephone companies, with their potential advantages in incumbency and economies of scale in using existing facilities. To address these inequalities, we propose a 10 percent bidding credit for small businesses. This credit would be smaller than the credits we have adopted for other services, except GWCS. We believe that the magnitude of the credit is reasonable and equitable here, however, in view of other proposals which will benefit DEs, including the relatively small geographic licensing areas and the availability of installment payments. Notwithstanding the foregoing, we seek comment on whether small businesses bidding for 37 GHz licenses should receive a larger bidding credit,

¹⁴⁷ DEs consist of small businesses, minority- and female-owned businesses, and rural telephone companies. Competitive Bidding Second Report and Order at ¶¶ 266-288.

¹⁴⁸ Competitive Bidding Second Report and Order at ¶ 241.

such as 25 percent. We are also proposing a wide scope of the bidding credit by permitting eligible entities to apply the credit to all 37 GHz licenses. We tentatively conclude that these bidding preferences will carry out the Congressional intent and provide DEs, including small businesses owned by women and minorities, with a meaningful opportunity to obtain 37 GHz licenses. We seek comment on these proposals. We also seek comment on whether to offer "tiered" bidding credits scaled according to a small business applicant's financial size.

80. Specifically, we seek comment on whether the above bidding credit proposals satisfy the mandate of Section 309(j)(4)(D) of the Act to ensure that businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services. We ask commenters who believe that the above bidding credit proposals do not satisfy Section 309(j)(4)(D) to make specific alternative proposals. Also, to the extent such proposals are not race- and gender-neutral, we ask such commenters to address how their proposals can be reconciled with Adarand.

c. Installment Payments

81. We additionally propose adopting installment payments for small businesses bidding for any of the 37 GHz licenses. We have previously concluded that installment payments are an effective means to address the inability of small businesses to obtain financing and will enable these entities to compete more effectively for the auctioned spectrum.¹⁴⁹ Again, we base these proposals on the DE provisions adopted in the 4660-4685 MHz band for GWCS.

82. For the 37 GHz licenses, we tentatively conclude that installment payments are an appropriate preference for small businesses bidding on all license blocks. In this respect, installment payments will provide financial assistance to all small businesses. By allowing payment in installments, the government is in effect extending credit to licensees, thus reducing the amount of private financing needed prior to the auction. Such low cost government financing will promote participation by small businesses, which, because of their size, lack access to capital needed to participate in new spectrum opportunities such as 37 GHz. We seek comments on these proposals.

83. Under our proposal, small business licensees may elect to pay their winning bid amount (less upfront payments) in installments over the ten year term of the license, with interest charges to be fixed at the time of licensing at a rate equal to the rate for ten year U.S. Treasury obligations plus 2.5 percent. Installment payments would be due quarterly on the anniversary of the day the license was granted. We propose that timely payment of all installments would be a condition of the license grant and failure to make such timely payments would be grounds for revocation of the license.

¹⁴⁹ Id.

84. We also propose additional payment preferences to further reduce the capital needs of small businesses. Under this proposal, small business licensees will be permitted to make interest-only installment payments during the first two years of the license.¹⁵⁰ We also propose to reduce down payments for small businesses to 5 percent of the winning bid due five days after the auction closes and the remaining 5 percent down payment due five days after Public Notice that the license is ready for grant. We seek comments on these proposals. We also seek comment on whether to offer "tiered" installment payments scaled to the financial size of a small business applicant.

85. We seek comment on whether the above installment payment proposals satisfy the mandate of Section 309(j)(4)(D) of the Act to ensure that businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services. We ask commenters who believe that the above installment payment proposals do not satisfy Section 309(j)(4)(D) to make specific alternative proposals. Also, to the extent such proposals are not race- and gender-neutral, we ask such commenters to address how their proposals can be reconciled with Adarand.

d. Eligibility for Bidding Credits, Installment Payments and Reduced Down Payments

86. We propose to limit eligibility for bidding credits, installment payments and reduced down payments to small businesses, including those owned by members of minority groups and women. As discussed below, we propose to define small businesses as those entities with less than \$40 million in average annual gross revenues for the preceding three years. We seek comment, however, on a "tiered" small business definition. Under this proposal there could, for example, be three different sizes of small businesses that are eligible for bidding credits and installment payments in accordance with their size (e.g., tier 1: gross revenues (gr) less than \$6 million (m); tier 2: $\$6m \leq gr < \$15m$; and tier 3: $\$15m \leq gr < \$40m$).

87. Small Business Definition. In the Competitive Bidding Second Memorandum Opinion and Order, we stated we would define eligibility requirements for small businesses on a service-specific basis, taking into account the capital requirements and other characteristics of each particular service in establishing the appropriate threshold.¹⁵¹ There, we stated that a proper threshold for small businesses was \$6 million of average gross income.¹⁵² However, for the broadband PCS auctions, we believed that build-out and operational costs would be much higher than for other services, and therefore modified the small business threshold to be

¹⁵⁰ See, e.g., Competitive Bidding Fifth Report and Order at ¶¶ 138-39.

¹⁵¹ Competitive Bidding Second Memorandum Opinion and Order at ¶ 145.

¹⁵² Competitive Bidding Second Report and Order at ¶¶ 267-271.

\$40 million.¹⁵³ We also adopted this same small business threshold for GWCS as we had previously adopted for broadband PCS, finding that the capital costs of operational GWCS facilities are likely to vary widely because of the likelihood that there will be a range of license sizes and services offered.¹⁵⁴

88. We propose to adopt the same \$40 million small business definition for 37 GHz licenses. We believe that it is likely that 37 GHz licenses will be sought by broadband PCS licensees for use as backhaul and backbone communications links. Therefore, it seems appropriate to adopt a small business definition similar or identical to that adopted for broadband PCS. Our proposals for the 37 GHz band, however, would not mandate that this spectrum be used in conjunction with PCS operations. We believe that our proposals allow enough flexibility that licensees in the 37 GHz band may provide a variety of services, using differing geographic areas. In this respect, our proposal is similar to that adopted for GWCS in the 4660-4685 MHz band. For these reasons, we propose to adopt the small business definition used for both broadband PCS and GWCS. In addition, we propose to apply the same affiliation and attribution rules for calculating revenues that we have previously adopted for broadband PCS and GWCS. We seek comment on these proposals. We recognize, however, that the attribution rules for calculating gross revenues for broadband PCS are quite complex. We therefore seek comment on substituting the "control group" concept for some sort of simpler attribution model. We ask whether the revenues of the small business entity, its affiliates, as well as the revenues of investors in the small business and their affiliates should be counted for purposes of determining eligibility. Should all investors in the small business applicant be attributable, or should only investors that hold ownership interests at a certain threshold have their gross revenues included (e.g., ownership interests of 5 percent would trigger attribution). Another alternative is that we could look to investors that have controlling interests in the small business applicant to determine eligibility. Finally, we question whether there is a need for a personal net worth test, which would be applied to all attributable investors in the applicant. We previously had such a requirement in broadband PCS but decided to eliminate it. See Competitive Bidding Fifth Report and Order, *supra* note 40. We seek comment on whether there is a need to revive this requirement here.

89. Rural Telephone Company Partitioning. Congress directed us to ensure that, together with other small businesses, rural telephone companies have the opportunity to participate in the provision of spectrum-based services. Rural areas, because of their more dispersed populations, tend to be less profitable to serve than more densely populated urban areas. Therefore, service to these areas may not be a priority or economically feasible for many licensees.¹⁵⁵ Rural telephone companies, however, are well positioned because of their

¹⁵³ Competitive Bidding Fifth Report and Order at ¶¶ 176-180.

¹⁵⁴ See Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use 4600-4685 MHz (Second Report and Order), FCC 95-319, released August 2, 1995, at ¶ 95.

¹⁵⁵ See, e.g., 900 MHz Second Report and Order at ¶¶ 144-145.

existing infrastructure to serve these areas. Therefore, we propose a geographic partitioning scheme similar to that adopted in broadband PCS¹⁵⁶ and GWCS¹⁵⁷ which we believe will encourage participation by rural telephone companies, thereby increasing the likelihood of rapid introduction of service to rural areas.

90. Our proposed partitioning scheme would prevent rural telephone companies from having to bid on the entire BTA or other geographic area covering their wireline service areas. In addition, partitioning would provide rural telephone companies with the flexibility to be able to serve areas in which they already provide service, while the remainder of the service area could be served by other providers.¹⁵⁸ Under this proposal, rural telephone companies would be permitted to acquire partitioned 37 GHz licenses in either of two ways: (1) they may form bidding consortia consisting entirely of rural telephone companies to participate in auctions, and then partition the licenses won among consortia participants; and (2) they may acquire partitioned 37 GHz licenses from other licensees through private negotiation and agreement either before or after the auction.¹⁵⁹ We would also require that partitioned areas conform to established geopolitical boundaries and that each area include all portions of the wireline service area of the rural telephone company applicant that lies within the service area.¹⁶⁰ We also propose to use the definition for rural telephone companies implemented in the Competitive Bidding Fifth Report and Order for broadband PCS.¹⁶¹ Rural telephone companies would be defined as local exchange carriers having 100,000 or fewer access lines, including all affiliates.¹⁶² Finally, we seek comment on whether partitioning should be offered to all applicants (not just rural telephone companies) similar to what we have offered in the context of MMDS. See MMDS Report and Order, *supra* note 66, at ¶¶ 46-47.

e. Transfer Restrictions and Unjust Enrichment Provisions

91. Restrictions on the transfer or assignment of licenses acquired by DEs are intended to promote the Congressional intent that DEs be permitted to participate in the

¹⁵⁶ Competitive Bidding Fifth Report and Order at ¶ 150.

¹⁵⁷ GWCS Second Report and Order at ¶ 107.

¹⁵⁸ Competitive Bidding Fifth Report and Order at ¶ 151.

¹⁵⁹ Id.

¹⁶⁰ Id.

¹⁶¹ Id. at ¶ 193.

¹⁶² Id.

provision of spectrum-based services,¹⁶³ not simply to profit from trafficking in licenses acquired with the help of bidding preferences. We seek comment on the appropriate transfer restrictions for small businesses obtaining 37 GHz licenses. For example, in GWCS we adopted a payment requirement on transfers of licenses acquired with the assistance of bidding preferences to entities that are not small businesses. Small businesses seeking to transfer a license to an entity that is not a small business, as defined for GWCS, would be required to reimburse the government for the amount of the bidding credit, plus interest at the rate imposed for installment financing at the time the license was awarded, before the transfer would be permitted. The amount of the penalty would be reduced over time so that a transfer in the first two years of the license would result in a payment of 100 percent of the value of the bidding credit; in year three of the license term the payment would be 75 percent; in year four the penalty would be 50 percent and in year five the payment would be 25 percent, after which there would be no payment.¹⁶⁴

92. Another approach was adopted in the Competitive Bidding Fifth Report and Order, where we adopted restrictions on the transfer or assignment of broadband PCS entrepreneur's block licenses to ensure that DEs do not take advantage of special provisions by immediately assigning or transferring control of their licenses.¹⁶⁵ Therefore, broadband PCS licensees in the entrepreneurs' blocks may not voluntarily assign or transfer control of their licenses for a period of three years from the date of the license grant. For years 4 and 5 of the license term, the licensee may assign or transfer control of its authorization only to an entity that satisfies the entrepreneurs' block entry criteria. During this five-year period, licensees will continue to be bound by the financial eligibility requirements. In addition, a transferee or assignee who receives an entrepreneurs' block license during the five-year period will remain subject to the transfer restrictions for the balance of the holding period.¹⁶⁶ In addition, a licensee assigning its authorization would be subject to the repayment provisions associated with installment payments and bidding credits.¹⁶⁷

93. We seek comment on which of the described approaches would be more appropriate for small business licensees in the 37 GHz band. We ask commenters to address whether our decision should be influenced by that fact that in the 37 GHz band we are not proposing an entrepreneur's block.

¹⁶³ See 47 U.S.C. § 309(j)(4)(D).

¹⁶⁴ GWCS Second Report and Order at ¶ 110.

¹⁶⁵ Competitive Bidding Fifth Report and Order at ¶ 128.

¹⁶⁶ Id.

¹⁶⁷ Id. at n. 102.

f. Other Provisions

94. Set-aside Spectrum. In the Competitive Bidding Fifth Report and Order we established entrepreneurs' blocks on which only qualified entrepreneurs, including small businesses, could bid.¹⁶⁸ We tentatively conclude not to adopt an entrepreneurs' block for the 37 GHz auction for several reasons. First, the relatively large numbers of licenses available in the 37 GHz band should allow for extensive small business participation. Second, unlike broadband PCS, we do not believe that the effectiveness of bidding credits, reduced down payments and installment payments will be diluted, due to the smaller capital outlay anticipated for this service. We request comment on this proposal. Specifically, are the capital requirements of this service anticipated to be so substantial that we should insulate certain blocks from very large bidders in order to provide meaningful opportunities for small businesses? In addition, is there a need to adopt an entrepreneurs' block to ensure that there will be adequate spectrum available for communications links for broadband PCS entrepreneur block licensees?

5. Conclusion

95. We believe that the competitive bidding rules we adopt for 37 GHz, in conjunction with our spectrum allocation rules, will promote the public policy objectives set forth by Congress. Our rules will encourage economic growth and enhance access to 37 GHz services for consumers, producers, and new entrants. Structuring our rules to promote opportunity and competition should result in the rapid implementation of new PCS services and encourage efficient spectrum use. The preferences we adopt for small businesses will help to promote access to the 37 GHz band and broadband PCS services by ensuring that these groups will have genuine opportunities to participate in the auctions and in provision of service.

F. Eligibility, License Transfer, Buildout and License Term

96. Originally, TIA proposed that applicants be assigned channels in the 37 GHz band only after demonstrating their need for multiple service points or transmission paths within the service area. TIA further proposed to limit each licensee to one channel pair in a service area until it demonstrates that the authorized channel pair is operating at or near expected capacity. In its amendment, TIA proposes that the six 50 MHz channel pairs be reserved for broadband PCS, cellular and SMR licensees until the year 2000.

97. We tentatively conclude that the use of auctions to resolve mutually exclusive applications in this band will reduce the possibility of applicants that are not financially qualified and will deter speculation by parties that do not have specific communications

¹⁶⁸ Id. at ¶¶ 113-123. These rules were further refined in the Competitive Bidding Fifth Memorandum Opinion and Order. See 47 C.F.R. § 24.709.

requirements. Accordingly, we propose open eligibility for these frequencies and do not intend to require applicants to prove that they are financially qualified. We also believe that license transfer restrictions may reduce the ability of licensees to put this spectrum to its highest valued use and therefore are not proposing such requirements, except for small businesses receiving the benefits of our proposed bidding credits and installment payments.¹⁶⁹ Finally, we propose to establish the term of licenses in this band as ten years, with a renewal expectancy similar to that of cellular telephone licenses.¹⁷⁰ We request comment on this proposal.

98. The Communications Act requires us to "include performance requirements, such as appropriate deadlines and penalties for performance failures, to ensure prompt delivery of service to rural areas, to prevent stockpiling or warehousing of spectrum by licensees or permittees, and to promote investment in and rapid deployment of new technologies and services."¹⁷¹ In this Notice, we are seeking comment on specific performance requirements. Commenters are requested to address whether these requirements, if adopted, would be sufficient to comply with the performance requirements of the Act. If not, we seek comment on additional performance requirements that we might adopt in order to comply with the Act. We therefore seek comment on the appropriate buildout requirement for the auctioned microwave services. Traditionally, the Commission has licensed individual links for point to point microwave services and thus construction deadlines have involved the building of individual stations. Because we propose to license the 37 GHz and 39 GHz band over Commission-defined geographic service areas, we seek comment on appropriate buildout requirements for such a licensing scheme. As explained above, the Communications Act requires us to include performance requirements to ensure prompt delivery of service to rural areas, to prevent stockpiling or warehousing of spectrum by licensees or permittees, and to promote investment in and rapid deployment of new technologies and services. We believe that the buildout requirements adopted for mobile services that require the provision of service to a percentage of the population in the service area may be inappropriate for point-to-point microwave services. We seek comment therefore on other methods we might use to ensure that licensees are using their spectrum, servicing rural areas, and enabling the provision of new services to the public. For example, we may require a showing of substantial service in the licensed service area.¹⁷² Commenters should also address the point in the license term that buildout requirements should be measured.

¹⁶⁹ See ¶ 91-93, supra.

¹⁷⁰ See 47 C.F.R. §§ 21.45 and 22.940. We also adopted this same renewal expectancy criteria for broadband PCS licenses.

¹⁷¹ See Section 309(j)(4)(B) of the Communications Act, as amended.

¹⁷² See, e.g., 47 C.F.R. § 24.203(b).

G. Long Form Application and Regulatory Status

99. Under our competitive bidding proposal, if the winning bidder makes the down payment in a timely manner, a long-form application would be required to be filed by a specified date, generally within ten (10) business days after the close of the auction.¹⁷³ Based on the Commission's current rules, we propose that if a winning bidder intends to provide a common carrier service it would file FCC Form 494 and if it intends a private use for the spectrum, the winning bidder would file FCC Form 402. We seek comment on whether a licensee in the 37 GHz band should be allowed to use the spectrum for private use and also to provide a common carrier service. Commenters should address which application form such a winning bidder would file, and whether we should require a licensee to specify over which portion of the spectrum, channels, or geographic area it proposes to provide a common carrier service. After the Commission receives the winning bidder's down payment and the long-form application, we would review the long-form application to determine if it is acceptable for filing.¹⁷⁴

100. We propose to adopt the application processing rules contained in Parts 21 and 94 of the Commission's Rules for 37 GHz service. These rules would govern application filing and content requirements, waiver procedures, procedures for return of defective applications, regulations regarding modification of applications, and general application processing rules. We seek comments on these proposals and request that commenters address specifically any modifications to our existing procedures that would be necessary to process applications for our proposed BTA licensing of the 37 GHz band.

101. We also propose adopting petition to deny procedures based on Section 21.30 of the Commission's Rules for winning bidders proposing to use their licenses to provide at least some common carrier service. Upon acceptance for filing of FCC Form 494 to provide a common carrier service at 37 GHz, we would release a Public Notice announcing this fact, triggering the filing window for petitions to deny. If we deny all petitions to deny, and are otherwise satisfied that the applicant is qualified, a Public Notice announcing the grants will be issued. Winning bidders would have five (5) business days after the issuance of the Public Notice to complete payment of their licenses. We would then have ten (10) business days to grant the licenses. We seek comment on this proposal.

H. Alternative Licensing Proposal

102. Alternatively, if competitive bidding is not adopted, we solicit comment on licensing the 37 GHz band in the same manner as we currently license the 39 GHz band with the following modifications. Service areas would be based on BTAs. Eligibility for Channel

¹⁷³ See Competitive Bidding Fifth Report and Order at ¶ 81.

¹⁷⁴ Id.

Blocks 15 through 20 would be limited to broadband PCS licensees until three months after the last broadband PCS license is issued. Eligibility for Channel Blocks 21 through 28 would be limited to broadband PCS, cellular, and wide-area SMR licensees for three years, commencing with the effective date of the rules adopted in this proceeding. After the expiration of these restrictions, eligibility would be open to all parties. Eligibility for unpaired Channel Blocks 29 through 32 would be unrestricted.¹⁷⁵ Our intent in proposing to restrict initial eligibility for the paired channel blocks is to ensure that cellular, wide-area SMR and broadband PCS licensees have access to adequate support channels. Parties commenting on alternative licensing proposals should address whether such proposals will ensure participation by new entrants in the 37 GHz band.

103. Further, as part of the alternative licensing scheme, we propose to require that applicants demonstrate a need for each channel requested,¹⁷⁶ that applicants initially be limited to one channel per designated service area (e.g., BTA), that all licensees, except broadband PCS licensees, construct their system within 18 months and that such construction be defined as the ability to pass communications traffic significantly throughout the service area,¹⁷⁷ and that license transfers of unbuilt systems be prohibited.¹⁷⁸ We propose to establish the term of licenses in this band as ten years, with a renewal expectancy similar to that of cellular telephone licenses. Additionally, each licensee would be permitted to apply for an additional channel in its service area only when it is operating its previously authorized channel(s) at or near expected capacity. Furthermore, if auctions are not used, there may be spectrum inefficiencies in using a designated service area such as BTAs. For example, since even BTAs are relatively large areas, there may be areas within each BTA where the licensed spectrum is not needed or used by the licensee, and therefore that spectrum would lie fallow. Accordingly, we request comment on whether we should require licensees at some time in the future, possibly five or seven years after licensing, to provide the Commission with a report of their operations so that we could provide a second licensing opportunity for parties interested in those portions of licensed service areas that are unused. We specifically request comment on what criteria should be applied in determining whether a licensed service area is underused to the point that other applicants should be permitted to propose service in that area. If we allow an additional party to obtain a license in an existing licensee's BTA, we propose to require them to coordinate informally on a link-to-link basis. We solicit comment on this alternative.

¹⁷⁵ Mutually exclusive applications still may be filed, thus necessitating a method to select among licensees.

¹⁷⁶ See note 13, *supra*.

¹⁷⁷ See 47 C.F.R. § 21.43. We are not proposing construction requirements for broadband PCS licensees in any BTA for which they are licensed since these licensees already have a build-out schedule. See 47 C.F.R. § 24.203.

¹⁷⁸ See 47 C.F.R. § 21.39.

I. Revision of the Licensing Rules for the 39 GHz Band

104. We also propose to use auctions in awarding future licenses in the 39 GHz band. We believe that auctions place licenses in the hands of those who value them most and that using auctions would allow us to license the remainder of the 39 GHz band in the most expeditious manner. Accordingly, we propose to use the same auction procedures for the 39 GHz band as are proposed for the 37 GHz band. To do this requires that we clearly define exclusive service areas for the 39 GHz band. Consistent with our proposal for the 37 GHz band, we propose to use BTA service areas. We also propose that all 39 GHz BTA channel blocks not encumbered with previously licensed rectangular service areas be auctioned at the same time as the 37 GHz band. Those 39 GHz BTA channels that are encumbered will be auctioned at a later date to be determined after the resolution of the incumbency issue, as discussed below.

105. In order to accommodate incumbent operations, we propose that licensees of rectangular service areas be given eighteen months from the adoption of a Report and Order in this proceeding to file with the Commission a certification that they have constructed a minimum average of four permanently installed and operating links per hundred square kilometers (approximately one link per ten square miles) of their licensed service area for each licensed channel block. Further, licensees with more than one channel block must certify that each channel block contains at least four permanently installed and operating links per hundred square kilometers that can not be reaccommodated in another channel block. In this regard, we believe it important that, in order to be counted toward the construction threshold, all such links be capable of carrying a reasonable amount of communications traffic. We request comment on what an appropriate test of such capacity or usage should be. For example, should we require that each such link must operate with a minimum equivalent digital efficiency of 1 bps/Hz over the entire channel block? If a licensee meets the threshold construction and filing requirements, then the licensee would retain its entire rectangular service area. However, if a licensee does not meet these requirements, then the license would be automatically canceled nineteen months from the adoption of a Report and Order in this proceeding. Further, licensees of rectangular service areas not meeting the above construction threshold must file a list of permanently installed and operating links that they wish to have grandfathered no later than eighteen months from the adoption of a Report and Order in this proceeding. The Commission would then relicense qualifying links individually. Failure to file timely a list of installed and operating links would result in automatic cancellation of the respective licenses. Also, the right to take advantage of the above eighteen-month build-out provision would apply only to those entities holding valid licenses as of the date of adoption of the Report and Order. In particular, parties whose licenses are forfeit because of failing to meet timely the construction requirements would not have this right. See 47 C.F.R. §§ 21.43, 21.44, and 94.51. In this connection, we wish to clarify that we interpret these rules to apply to rectangular service area licenses as well as to individually licensed stations. We solicit comment on these proposals, including the above interpretation of the cited rules regarding period of construction and forfeiture of license. We also solicit comment on whether licensees should be permitted to request a reduction in the size of their rectangular service

area in order to meet the threshold.¹⁷⁹ Licensees would have until eighteen months from the adoption of a Report and Order in this proceeding to file a modification application for a reduction in the size of their rectangular service area and/or for a return of unneeded channel blocks. We do not intend to make such licensing modifications sua sponte; licensees would have the responsibility to apply for them in a timely fashion. We do not intend to accept late-filed applications for such modification.

106. We make these proposals in order to minimize speculation without harming existing 39 GHz licensees who are responsibly developing the spectrum they have been assigned. We believe that the Commission has both the right and the responsibility to modify licenses to further the public interest. We also observe that in a recent decision, the U.S. Court of Appeals for the D.C. Circuit upheld a Commission rule making proceeding that effectively modified the size of cellular licensees' Cellular Geographic Service Areas. See Amendment to Part 22, Second Report and Order, 7 FCC Rcd 2449 (1992). Specifically, the Court held that this was "precisely the type of decision appropriately made in a rule making." See Committee for Effective Cellular Rules v. FCC, 53 F.3d 1309, 1319 (D.C.Cir. 1995).

107. In addition to seeking comment on the construction threshold test proposed above, which is based on the number of permanently installed and operating links per hundred square kilometers of service area, we also seek comment on two alternative threshold tests. We seek comment on whether a threshold test based on a fixed number of links per rectangular service area -- such as 15 -- (regardless of size of the service area) is a more appropriate means of ensuring that speculation and warehousing of spectrum is minimized. We also seek comment on the advisability of establishing a threshold test based on a fixed number of links per rectangular service area, but in which the number of required links varies by market size. For example, such a threshold test might require that 15 permanently installed and operating two-way links be constructed for each licensed channel block in the top 10 markets, that a minimum of 10 permanently installed and operating two-way links be constructed for each licensed channel block in markets 11-25, and that a minimum number of 5 permanently installed and operating two-way links be constructed for each licensed channel block in all other markets. For either alternative, we request comment on whether we should require that each link operate with a minimum equivalent digital efficiency of 1 bps/Hz over the entire channel block. Those commenting on this approach should address both the number of links required to be constructed and the appropriate definition of the geographic market. Finally, we seek comment on whether we should combine aspects of this alternative test with the test proposed in the preceding paragraphs, including a minimum equivalent digital efficiency standard, and require that licensees construct both a certain number of links per hundred square kilometers of service area and a specified number of links in major markets which overlap their service area.

¹⁷⁹ An application to make such a reduction in size would be considered a minor modification.

108. If a licensee of a rectangular service area does not meet the threshold requirement, then its constructed links could be grandfathered and its rectangular service area license would be automatically canceled. Incumbent licensees would be required to file a list of permanently installed and operating links that they wish to have grandfathered. We note that 39 GHz band licensees are currently required to file a list of all operations in each authorized service area every six months,¹⁸⁰ which we believe could alternatively be used as the basis for substantiating grandfathering of such links. We solicit comment on these proposals and whether links authorized under Part 21 should be required to carry third party traffic in order to qualify for grandfather status. We note that we do not intend to grandfather temporary links. We further propose that any grandfathered link which subsequently ceases operations for a period of 30 consecutive days or more be deemed automatically forfeited, in which case the authorization must be returned to the Commission.¹⁸¹ We also propose that the right to use "returned" spectrum would go to the BTA licensee if the return occurs after grant of such license.

109. As an alternative to relicensing incumbent facilities on their current frequency, we solicit comment on whether incumbent links should be "repacked" into a portion of the band, e.g., most grandfathered links would be switched to one designated channel pair provided that mutual interference would not result. Commenters should address whether such repacking is feasible or desirable and, if so, how this would be done.

110. As an additional matter, we note that the lower portion of the 39 GHz band, 38.6-39.5 GHz, is allocated to the fixed, mobile, and fixed-satellite (space-to-Earth) services and that the upper portion of the 39 GHz band, 39.5-40 GHz, is allocated to these services and to the mobile-satellite (space-to-Earth) service. We solicit comment on whether our proposed modifications for licensing the 39 GHz band would have any affect on the sharing of this band among these services. Further, comment is solicited on whether we should provide for more flexible use of the 39 GHz band, including whether we should broaden permissible uses to include point-to-multipoint and/or mobile services in this band, perhaps under a broader service category such as GWCS or LMWS. Greater flexibility of use is likely to ensure that this spectrum is ultimately used for those services of highest value to the public.¹⁸²

111. As an alternative to using competitive bidding in our licensing process, we seek comment on whether to license the 39 GHz band under our current rules with certain modifications. Specifically, we propose to strengthen and codify the policy guidance given in the Public Notice so that all applicants for channels in the 39 GHz band would be required to make the following showings:

¹⁸⁰ See 47 C.F.R. §§ 21.711(c), 94.61(b) note 18.

¹⁸¹ See, e.g., 47 C.F.R. § 21.44.

¹⁸² See supra ¶13.

- i) Consideration of non-radiofrequency (non-RF) solutions. That the applicant has given detailed consideration to non-RF solutions for satisfying its communications requirements, including but not limited to fiber optic cable and wireline, and explaining why such alternatives are technically unacceptable, as opposed to merely less economically preferable.
- ii) Clear and present need. That the applicant has an immediate and real need for the proposed communications. Neither speculation, nor anticipated market development, nor a desire merely to hold a license will be sufficient in this regard. Each narrative must include an implementation schedule with six month benchmarks and will be required to demonstrate system construction and operation within the construction deadline imposed by Section 21.43 of the Rules.
- iii) Frequency and efficiency. Normally, only one channel block will be authorized per applicant per geographic area. New assignments will be licensed by BTAs. Current applicants must modify their applications accordingly. A future request for an additional channel block will be considered only if the applicant demonstrates that:
 - o An immediate requirement exists for simultaneous communications within the licensed service area;
 - o Frequency re-use is impossible as demonstrated by an engineering showing;
 - o All previously authorized channel blocks within the licensed service area are constructed, are operational, and are loaded to 100% capacity;
 - o All frequencies are loaded to a minimum equivalent digital efficiency of 1 bps/Hz;
 - o All transmitting equipment is operating with a frequency tolerance of 0.001%; and
 - o Only Category A antennas are employed.
- iv) Full disclosure. Applicants must fully disclose the real party (or parties) in interest, including a complete disclosure of the identity and relationship of those persons or entities directly or indirectly owning and/or controlling the applicant.

In addition, licensees must construct their facilities and must be passing communications traffic on all of assigned channel blocks throughout their licensed service areas by the end of the eighteenth month since initial license grant. An extension to the 18 month period of construction will not generally be granted. If construction is not timely completed, the licensee's authority to construct additional links will be automatically cancelled and forfeited,

and the licensee must notify us as to which links have been constructed so that those links may be grandfathered.

J. Spectrum Cap

112. Regardless of the licensing method or methods chosen for the 37 GHz and 39 GHz bands, we seek comment on whether we should adopt a limit on aggregation of channel blocks in each BTA in the combined 37-40 GHz band. Our goal is to ensure that there are an adequate number of licenses available to meet the needs of broadband PCS licensees, as well as the needs of other competitors in the wireless marketplace. In order to address this issue, we must first address the definition of the market in which 37 and 39 GHz licensees will compete. We therefore request comment on whether the 37 and 39 GHz service represents a discrete market. We also request comment on whether the relevant market includes other substitutable spectrum. Finally, we request comment on whether the relevant market includes other substitutable technologies such as fiber optics. If the relevant market is posited to include substitutes, we request comment on the appropriate level of any spectrum cap in these bands. If we conclude that the 37 and 39 GHz service represents a discrete market, we believe that some form of spectrum cap may be appropriate. Specifically, we propose to limit licensees to six of the 28 paired channel blocks and to two of the four unpaired channel blocks in each BTA in the combined 37-40 GHz band. We observe that this limit on spectrum aggregation would permit a single licensee to acquire 700 megahertz of spectrum in each BTA but would nevertheless ensure that there is adequate spectrum available to license in each BTA five operators, each with at least four paired channel blocks.¹⁸³ We also propose that licensees be defined as entities having an ownership interest of five or more percent or other attributable ownership interest, as defined in Section 24.204(d), in a license in Channel Blocks 1 through 32. In applying Section 24.204(d), applicants who are neither broadband PCS nor cellular licensees would be treated as if they were broadband PCS applicants. We seek comment on these proposals, including possible alternative spectrum cap formulas.

K. Technical Rules

113. In its petition, TIA requests that transmitter power be limited to 10 watts and that EIRP be limited to +50 dBW for operations in the 37 GHz band. TIA also proposes that the frequency tolerance be reduced to 0.001% for equipment operating in either the 37 GHz or

¹⁸³ E.g., four entities could each be licensed for six channel blocks, and one entity could be licensed for four channel blocks. Other potential combinations of licensees and channel blocks include: (a) four licensees @ six channel blocks each, plus four licensees @ 1 channel block each; (b) seven licensees @ 4 channel blocks each; and (c) twenty-eight licensees @ 1 channel block each.

the 39 GHz bands, instead of the 0.03% that is currently required for the 39 GHz band.¹⁸⁴ It states that this increase in stability would maximize the use of each channel, is well within the current state-of-the-art at these frequencies, and can be achieved without significant cost. TIA also proposes that only Category A antennas be permitted for systems operating in the 37 GHz and 39 GHz bands. TIA states that Category A antennas cost approximately the same as Category B antennas, but have superior radiation patterns that enhance frequency reuse.

114. In its amendment, TIA suggests that a 1 bps/Hz minimum bit efficiency should be enforced for the 5, 10, 20, and 40 MHz paired channels, except that a 12T1 transmission rate would be permitted in the 20 MHz channels.¹⁸⁵ TIA states that no minimum bit efficiency is needed for the 50 MHz unpaired channels since broadband users transporting analog video or high definition television video could readily fit within the 50 MHz channelization.

115. Since we are proposing to license the 37 GHz band and future assignments in the 39 GHz band by auction, we tentatively conclude that only those technical rules required to minimize interference between channel blocks and between service areas are needed. We propose to generally employ the current Part 21 Rules, except that we decline to specify a maximum transmitter power or directional antenna standards.¹⁸⁶ Additionally, we propose to allow a maximum EIRP of +55 dBW for operations in both the 37 and 39 GHz bands. This

¹⁸⁴ For example, the assigned frequency of Channel 29 (38.40-38.45 GHz) is 38.425 GHz. A frequency tolerance of 0.03% means that transmissions are permitted to drift outside either channel block edge (i.e., 38.40 GHz or 38.45 GHz) by as much as 11.5275 MHz, whereas a frequency tolerance of 0.001% means that the frequency drift is limited to ± 384.25 kHz.

¹⁸⁵ TIA did not request a minimum bit efficiency for its proposed 2.5 MHz and 50 MHz paired channels.

¹⁸⁶ See 47 C.F.R. §§ 21.107, 21.108. We also observe that in § 21.106(a)(2)(ii), the mean power of emissions is required to be attenuated below the mean output power of the transmitter ("emission mask") in accordance with the following schedule: $A = 27.9897 + 0.4 \times (P - 50)$, where A is the attenuation in dB, and P is the percentage of the authorized bandwidth removed from the carrier frequency (which is equal to the reference frequency, which in turn is generally the assigned frequency, plus and minus the frequency tolerance) and ranges from 50% to 250%. In addition, the schedule is bounded such that an attenuation of at least 11 dB, but no greater than 56 dB, is required. This is an application of the rule in which we have substituted 50 MHz for the authorized bandwidth for both paired and unpaired channel blocks. Authorized bandwidth is defined as the maximum width of the band of frequencies permitted to be used by a station. See 47 C.F.R. § 21.2. For licenses granted under the channel block methodology, the authorized bandwidth is equivalent to an unpaired channel block assignment or to either half of a paired channel block assignment. At more than 250% removed from the carrier frequency, the emission mask is described by the following schedule: $A \geq 43 + 10 \times \log_{10}(\text{mean output power in watts})$ dB, or 80 dB, whichever is the lesser attenuation. See 47 C.F.R. § 21.106(a)(2)(iii).

is consistent with our proposals in WT Docket No. 94-148.¹⁸⁷ In that proceeding, we proposed to abolish the limitation on maximum transmitter power and to increase the maximum EIRP to +55 dBW for most microwave frequencies from 4 GHz to 40 GHz, including the 39 GHz band.¹⁸⁸ This higher EIRP should allow for increased path reliability on long paths. Further, keeping our proposal consistent in both bands should allow for manufacturing efficiencies resulting from greater commonality in equipment. We also propose to adopt a 0.001% frequency tolerance for equipment operating in either the 37 GHz or the 39 GHz bands. We agree with TIA that this improvement in frequency stability would maximize the use of each channel block, is well within the current state-of-the-art at these frequencies, and can be achieved without significant cost. Furthermore, we propose to amend the bandwidth rule to clarify that, for channel block assignments, the authorized bandwidth is equivalent to an unpaired channel block assignment or to either half of a paired channel block assignment, e.g., 50 MHz, and to unambiguously specify that when adjacent channels are aggregated, equipment is permitted to operate over the full channel block aggregation without restriction.¹⁸⁹ We request comment on these proposals, especially the effect aggregation would have on co-channel and adjacent channel operations. In addition to the proposals made above, we solicit comment on whether a further lessening of technical requirements is appropriate. Specifically, we request comment on whether we should continue to specify a required frequency tolerance. If frequency tolerance were not specified in the rules, equipment would be required to merely maintain its operations fully within the "emission mask" at all times.¹⁹⁰

¹⁸⁷ See note 1, *supra*, at ¶ 17.

¹⁸⁸ These proposals were based partly on TIA recommendations. See Suggested Rule Changes for Merging Part 21 and Part 94 into Part 101, submitted by TIA on April 6, 1994, and letter from Robert J. Miller to Karen Rackley (May 2, 1994).

¹⁸⁹ If this proposal is adopted, unwanted emissions would continue to be suppressed at the aggregate channel block edges based on the same roll-off rate as is now specified for a single channel block.

¹⁹⁰ See note 186, *supra*. See also 47 C.F.R. § 21.101. We observe that the effect of requiring operations to stay within the emission mask at all times would be to reduce the frequency tolerance to levels more restrictive than that recommended by TIA, i.e., instead of a permitted drift in frequency of ± 384.25 kHz, no drift whatsoever would be permitted outside the emission mask. Of course, transmitters would be permitted to drift within the emission mask and licensees could purchase equipment with less drift if they had a need for greater capacity.

116. In addition, licensees of rectangular service areas are specifically reminded that:

The Commission may require the replacement, at the licensee's expense, of any antenna or periscope antenna system of a permanent fixed station operating at 2500 MHz or higher which does not meet performance Standard A specified in § 21.108(c), upon a showing that said antenna causes or is likely to cause interference to (or receive interference from) any other authorized or proposed station whereas an antenna meeting performance Standard A is not likely to involve such interference.

47 C.F.R. Section 21.109(b). If a BTA licensee is prevented from providing communications in its service area because a licensee of a grandfathered link is using Standard B antennas, we propose to require that a Standard A antenna be installed within six months of the matter being brought to the Commission's attention or else that the link cease transmissions. We request comment on this proposal.

117. In its petition, TIA did not suggest how coordination between co-channel licensees in adjacent BTAs should occur. In the 39 GHz band, proposed frequency usage is coordinated with other applicants, as well as existing licensees, whose facilities could suffer frequency interference or reduced system capacity as a result of implementing the new system.¹⁹¹ We believe that a similar coordination process could be implemented in the 37 GHz band. Specifically, we propose to let licensees coordinate among themselves at their service area borders regarding co-channel interference protection and at the channel block edges regarding adjacent channel interference protection. We believe that such a coordination process would be simpler and more efficient, due to the relatively large service areas that we are proposing.¹⁹²

118. To facilitate coordination between licensees in adjoining areas, we propose to establish a maximum field strength limit at the boundary of service areas. Similar field strength limits have been proposed or adopted in several other recent proceedings.¹⁹³ By

¹⁹¹ See 47 C.F.R. § 21.100(d).

¹⁹² Given our proposal to license on a BTA basis, we would not have in our database the specifics of each operational link. In view of this, we ask for comments on a procedure or method that would facilitate this coordination between licensees of adjacent BTAs.

¹⁹³ See Broadband PCS Second Report and Order at ¶ 177 (limiting field strength at each licensee's service area boundary to 47 dBu unless licensees operating in adjacent areas agree to higher field strengths along their mutual borders); MMDS Report and Order at ¶ 53 (limiting signal strength to a power flux density of - 73 dBW/m²); GWCS Second Report and Order at ¶ 111 (limiting field strength at each licensee's service area boundary to 55 dBu

precisely defining licensees' rights at geographic boundaries, field strength limits provide individual licensees with greater freedom to manage the systems and spectrum within their service areas without unnecessary and burdensome coordination. Co-channel licensees in adjoining BTAs would still be free to negotiate higher or lower limits or enter into other mutually beneficial agreements to facilitate efficient spectrum use near their common boundaries. Having a specific limit set initially by the Commission would provide a clear starting point for such negotiations. Due to our lack of technical data in this band, we are unable to suggest an appropriate power flux density or field strength limit, and therefore we request industry input on what a reasonable limit should be. In addition, we solicit comment on the appropriateness of removing all limitations on EIRP if a power flux density or field strength limit were adopted.

119. For any new assignments in the 37-40 GHz band not acquired through competitive bidding, we propose the following additional technical standards: permit the use of only Category A antennas and require a minimum equivalent digital efficiency of 1 bps/Hz. In the case of licenses for grandfathered links in the 39 GHz band, all rule changes, including proposed and additional rules, would only apply to facilities that are constructed after January 1, 1998, and to replacement equipment which is installed after that date. This proposal would provide the minimum equipment standards that are needed to make more efficient use of the spectrum. We believe that setting January 1, 1998 as the date for implementation of these requirements in the 39 GHz band will allow manufacturers adequate time to make any necessary changes to their equipment production lines and to deplete inventory.

L. Government Coordination

120. With regard to sharing the 37 GHz band between Government fixed and non-Government point-to-point operations, we propose to share the band on a first-come, first-served basis as follows. Commission licensees would be required to protect incumbent operations when they build out their system. Any new Government fixed operations would be coordinated on a link-by-link basis with the affected Commission licensees through our existing Government/non-Government coordination process. In order for us to process a coordination request, we are proposing to require that our licensees maintain a computer-readable database with the coordinates of their sites, frequencies (occupied bandwidth) assigned to their sites, EIRP, and other needed information for all of their links.¹⁹⁴ We

unless licensees operating in adjacent areas agree to higher field strengths along their mutual borders).

¹⁹⁴ If NTIA submits a link for coordination, we would contact the appropriate licensee(s), specify the minimum geographic area for which information must be filed, and request the needed information. Alternatively, licensees would be permitted to file the required information for all of their links and we would extract the relevant data.

believe that the current and anticipated low usage of this band by Government users makes this coordination process feasible. We request comment on the difficulty of coordinating between Government and non-Government users, especially in view of our BTA licensing approach. Specifically, we request comment on whether this band can be shared between Government and non-Government fixed services, or whether we should request that NTIA agree to an exclusive non-Government allocation on some of the channel blocks and to restrict new Government links, especially point-to-multipoint links, to certain channel blocks and/or areas. We recognize that a possible implication of requesting an exclusive non-Government allocation might be that NTIA would request a number of the channel blocks for exclusive Government use, which could lead to inefficiencies in spectrum use if Government use of the band is light. We request comment on how to minimize this possible inefficiency. For example, would a minimum equivalent digital standard be relevant in this context? Finally, we request comment on how the possibility of expansion of Government operations in this band will affect the feasibility of using auctions for the 37 GHz band and on the feasibility of broadening permissible uses of this spectrum to include mobile and other fixed services, should we decide to do so. The final coordination arrangement and any decision regarding exclusive allocations, either Government or non-Government, will be subject to further negotiations with NTIA.

M. Interim 39 GHz Licensing Policy

121. On November 13, 1995, pursuant to delegated authority, the Wireless Telecommunications Bureau (Bureau) ordered that no additional applications for 39 GHz frequency assignments would be accepted for filing as of the date of the Bureau's order pending the outcome of this proceeding.¹⁹⁴ The Bureau observed that over 2,100 applications for 39 GHz licenses had been filed since January 1995, and noted that the increasing number of applications filed pursuant to the existing rules was a burden on Commission resources and could inhibit our ability to update the regulatory structure of this service in light of today's marketplace conditions. The Bureau also stated that the freeze does not apply to applications for assignment or transfer of control of license. Likewise, we stress that the interim policy described below will not apply to assignment or transfer of control applications, which will continue to be processed under existing procedures.

122. With respect to previously filed 39 GHz applications now pending before the Commission, we take the following action. Pending applications will be processed if (1) they were not mutually exclusive with other applications at the time of the Bureau's Order, and (2) the 60-day period for filing mutually exclusive applications expired prior to November 13, 1995.¹⁹⁵ We conclude that processing pending applications against which no competing application has been timely filed will not impede the goals of this proceeding and can be

¹⁹⁴ Order, RM-8553, DA 95-2341, released November 13, 1995.

¹⁹⁵ See 47 C.F.R. § 21.31(b).

accomplished without significant burden on Commission resources. We also propose to apply to all licenses granted under this procedure the same revised construction threshold and grandfathering requirements that we have proposed to apply to incumbent 39 GHz licensees who received license grants prior to this Notice.¹⁹⁶

123. With respect to all other pending applications (*i.e.*, those that were subject to mutual exclusivity or still within the 60-day period as of November 13), we conclude that processing and disposition should be held in abeyance during the pendency of this proceeding.¹⁹⁷ First, resolving mutually exclusive applications requires greater expenditure of Commission resources than processing uncontested applications. Second, we are concerned that attempting to award licenses in mutually exclusive situations under our current rules could lead to results that are inconsistent with the objectives of this proceeding. Therefore, we will not process these applications (or any amendments thereto filed on or after November 13, 1995) at this time, but we intend to determine whether to process or return them, as appropriate, at the conclusion of this proceeding. We solicit comment on how these applications that will be held in abeyance should later be treated if new licensing and service rules are ultimately adopted in this proceeding.

124. Also in regard to pending applications for 39 GHz licenses, amendments received on or after November 13, 1995 will be held in abeyance during the pendency of this proceeding. We will similarly hold in abeyance those applications for modification of existing 39 GHz licenses filed on or after November 13, 1995, or modification application amendments filed on or after that date, and will not accept for filing any additional such modification applications and amendments, but for the following limited exception which will afford existing licensees alternative means of meeting the threshold construction requirement.¹⁹⁸ To be acceptable for filing, modification applications or amendments to them must meet both of the following criteria:

- o Do not involve any enlargement in any portion of the proposed area of operation; and
- o Do not change frequency blocks, other than to delete a frequency block(s).

¹⁹⁶ See supra paras. 104-111.

¹⁹⁷ Whenever the 60-day "cut-off" date for an application occurs on or after the processing "freeze" date of November 13, 1995, we will hold the application in abeyance. This will assure fairness to potential applicants who were precluded by the freeze from filing competing applications in time to be entitled to comparative consideration. Accordingly, all 39 GHz applications placed on public notice on or after September 14, 1995, will be treated for purposes of interim processing as if they were mutually exclusive. See 47 C.F.R. §§ 21.27, 21.31(b).

¹⁹⁸ See supra para. 105.

IV. ORDERING CLAUSE

125. ACCORDINGLY, IT IS ORDERED, That pending applications for new 39 GHz frequency assignments or for modification to 39 GHz licenses shall be held in abeyance and not processed until further notice, except as otherwise indicated in paragraphs 121 through 124 hereof. IT IS FURTHER ORDERED, That applications for modification of 39 GHz licenses or amendments to pending 39 GHz applications shall not be accepted for filing until further notice, except as indicated in paragraphs 121 through 124 above. The imposition of these changes in application processing is procedural in nature and, therefore, is not subject to the notice and comment and effective date requirements of the Administrative Procedure Act.¹⁹⁹ In any event, good cause exists for imposing immediately the processing changes without following these requirements because the changes are necessary to avoid impeding the purpose of any new rules adopted in this proceeding.

V. PROCEDURAL MATTERS

126. Initial Regulatory Flexibility Analysis. The analysis pursuant to the Regulatory Flexibility Act of 1980, 5 U.S.C. Section 608, is contained in Appendix B.

127. Initial Paperwork Reduction Act of 1995 Analysis. This Notice of Proposed Rule Making (NPRM) contains a proposed and modified information collection. As part of its continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this NPRM, as required by the Paperwork Reduction Act of 1995, Pub. L. No. 104-13. Public and agency comments are due at the same time as other comments on this NPRM; OMB comments are due 60 days from date of publication of this NPRM in the Federal Register. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

128. Ex Parte Presentation. This is a non-restricted notice and comment rule making proceeding. Ex parte presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in the Commission's Rules. See generally 47 C.F.R. Sections 1.1202, 1.1203, and 1.1206(a).

¹⁹⁹ See Neighborhood TV Co., Inc. v. FCC, 742 F.2d 629 (D.C. Cir. 1984); Buckeye Cablevision, Inc. v. United States, 438 F.2d 948 (6th Cir. 1971); Kessler v. FCC, 326 F.2d 673 (D.C. Cir. 1963).

129. Authority. This action is taken pursuant to Sections 4(i), 303(c), 303(f), 303(g), 303 (r) and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 303(c), 303(f), 303(g), 303(r) and 309(j).

130. Comment. Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, interested parties may file comments on or before **January 16, 1996**, and reply comments on or before **January 31, 1996**. All relevant and timely comments will be considered by the Commission before final action is taken in this proceeding. To file formally in this proceeding, participants must file an original and four copies of all comments, reply comments, and supporting comments. If participants want each Commissioner to receive a personal copy of their comments, an original plus nine comments must be filed. Comments and reply comments should be sent to Office of the Secretary, Federal Communications Commission, Washington, DC 20554. Comments and reply comments will be available for public inspection during regular business hours in the FCC Reference Center (Room 239) of the Federal Communications Commission, 1919 M Street, N.W., Washington, DC 20554.

131. Written comments by the public on the proposed and modified information collections are due **January 16, 1996**. Written comments must be submitted by OMB on the proposed and modified information collections on or before 60 days after the date of publication of the NPRM in the Federal Register. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Dorothy Conway, Federal Communications Commission, Room 234, 1919 M Street, N.W., Washington, DC 20554, or via the Internet to dconway@fcc.gov and to Timothy Fain, OMB Desk Officer, 10236 NEOB, 725 - 17th Street, N.W., Washington, DC 20503 or via the Internet to fain_t@al.eop.gov.

132. Additional Information. For further information concerning this rule making proceeding contact Fred Lee Thomas at (202) 418-2449, internet: ftomas@fcc.gov, or Tom Mooring at (202) 418-2450, internet: tmooring@fcc.gov, Office of Engineering and Technology, or Bob James at (202) 418-0680, internet: bjames@fcc.gov, Wireless Telecommunications Bureau, Federal Communications Commission, Washington, DC 20554.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

Appendix A: Proposed Rules

Parts 1, 2, 21 and 94 of title 47 of the Code of Federal Regulations are proposed to be amended as follows:

PART 1 -- PRACTICE AND PROCEDURE

1. The authority citation for Part 1 continues to read as follows:

AUTHORITY: 47 U.S.C. 151, 154, 303, and 309(j) unless otherwise noted.

2. Add paragraph (a)(8) to Section 1.2102 and revise paragraph (b)(4) of Section 1.2102 to read as follows:

§ 1.2102 Eligibility of applications for competitive bidding.

(a) * * *

(8) Basic trading area licenses in the 37.0-38.6 GHz and the 38.6-40.0 GHz bands.

(b) * * *

(4) Applications for channels in all frequency bands, except those listed in paragraph (a)(8), which are used as intermediate links in the provision of an integral, end-to-end, subscriber-based service.

* * * * *

PART 2 -- FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for Part 2 continues to read as follows:

AUTHORITY: Sec. 4, 302, 303, and 307 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154, 302, 303 and 307, unless otherwise noted.

2. Section 2.106, the Table of Frequency Allocations, is amended as follows:

- a. Remove the existing entries for 37.0-37.5 GHz, 37.5-39.5 GHz, and 39.5-40.5 GHz in columns (1) through (3) and for 37.0-38.6 GHz, 38.6-39.5 GHz, 39.5-40.0 GHz, and 40.0-40.5 GHz in columns (4) through (7).
- b. Add entries in numerical order for 37.0 - 37.5 GHz, 37.5 - 38.0 GHz, 38.0 - 38.6 GHz, 38.6 - 39.5 GHz, 39.5 - 40.0 GHz, and 40.0 - 40.5 GHz in columns (1) through (7).
- c. Remove International Footnote No. 899.

§ 2.106 Table of Frequency Allocations

* * *

International table			United States table		FCC use designators	
Region 1 -- allocation GHz	Region 2 -- allocation GHz	Region 3 -- allocation GHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation GHz (4)	Allocation GHz (5)	(6)	(7)
.
37.0 - 37.5 FIXED MOBILE SPACE RESEARCH (space-to-Earth)	37.0 - 37.5 FIXED MOBILE SPACE RESEARCH (space-to-Earth)	37.0 - 37.5 FIXED MOBILE SPACE RESEARCH (space-to-Earth)	37.0 - 37.5 FIXED MOBILE	37.0 - 37.5 FIXED MOBILE	DOMESTIC PUBLIC FIXED (21) PRIVATE OPERATIONAL-FIXED MICROWAVE (94)	
37.5 - 38.0 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)	37.5 - 38.0 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)	37.5 - 38.0 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)	37.5 - 38.0 FIXED MOBILE	37.5 - 38.0 FIXED MOBILE	DOMESTIC PUBLIC FIXED (21) PRIVATE OPERATIONAL-FIXED MICROWAVE (94)	
38.0 - 38.6 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth Exploration-Satellite (space-to-Earth)	38.0 - 38.6 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth Exploration-Satellite (space-to-Earth)	38.0 - 38.6 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth Exploration-Satellite (space-to-Earth)	38.0 - 38.6 FIXED MOBILE	38.0 - 38.6 FIXED MOBILE	DOMESTIC PUBLIC FIXED (21) PRIVATE OPERATIONAL-FIXED MICROWAVE (94)	
38.6 - 39.5 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth Exploration-Satellite (space-to-Earth)	38.6 - 39.5 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth Exploration-Satellite (space-to-Earth)	38.6 - 39.5 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth Exploration-Satellite (space-to-Earth)	38.6 - 39.5 FIXED MOBILE US291	38.6 - 39.5 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE US291	DOMESTIC PUBLIC FIXED (21) PRIVATE OPERATIONAL-FIXED MICROWAVE (94) Auxiliary Broadcasting (74)	
39.5 - 40.0 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)	39.5 - 40.0 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)	39.5 - 40.0 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)	39.5 - 40.0 FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) US291 G117	39.5 - 40.0 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) US291	DOMESTIC PUBLIC FIXED (21) PRIVATE OPERATIONAL-FIXED MICROWAVE (94) Auxiliary Broadcasting (74)	
40.0 - 40.5 EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth Exploration-Satellite (space-to-Earth)	40.0 - 40.5 EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth Exploration-Satellite (space-to-Earth)	40.0 - 40.5 EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth Exploration-Satellite (space-to-Earth)	40.0 - 40.5 FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) G117	40.0 - 40.5 FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth)		
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PART 21 - DOMESTIC PUBLIC FIXED RADIO SERVICES

1. The authority citation for Part 21 continues to read as follows:

AUTHORITY: Secs. 1, 2, 4, 201-205, 208, 215, 218, 303, 307, 313, 403, 404, 410, 602, 48 Stat. as amended, 1064, 1066, 1070-1073, 1076, 1077, 1080, 1082, 1083, 1087, 1094, 1098, 1102; 47 U.S.C. 151, 154, 201-205, 208, 215, 218, 303, 307, 313, 314, 403, 404, 602; 47 U.S.C. 552, 554.

2. In § 21.101(a), the frequency band 19,700 to 40,000 MHz is removed from the table and the frequency bands 19,700 to 37,000 MHz and 38,600 to 40,000 MHz and footnote 7 are added in numerical order to the table to read as follows:

§ 21.101 Frequency tolerance.

(a) * * *

Frequency range (MHz)	Frequency tolerance (percent)		
	All fixed and base stations	Mobile stations over 3 watts	Mobile stations 3 watts or less ¹
*	*	*	*
19,700 to 37,000	0.03	0.03	0.03
37,000 to 38,600	0.001
38,600 to 40,000 ⁷	0.001	0.001	0.001

* * *

⁷ Equipment installed prior to January 1, 1998, may employ a frequency tolerance of 0.03%. However, equipment installed on or after that date shall comply with the $\pm 0.001\%$ tolerance limit.

* * * * *

3. In Section 21.105, the existing unlabeled paragraph is revised as paragraph 21.105(a) and paragraph 21.105(b) is added to read as follows:

§ 21.105 Bandwidth.

(a) * * * * *

(b) For channel block assignments, the authorized bandwidth is equivalent to an unpaired channel block assignment or to either half of a symmetrically paired channel block assignment. When adjacent channels are aggregated, equipment is permitted to operate over the full channel block aggregation without restriction.

NOTE: Unwanted emissions shall be suppressed at the aggregate channel block edges based on the same roll-off rate as is specified for a single channel block in paragraphs 21.106(a)(2)(ii) and (iii) of this chapter.

4. In § 21.107(b), the frequency band 37,000 to 38,600 MHz is added in numerical order to the table to read as follows:

§ 21.107 Transmitter power.

* * * * *

(b) * * *

Frequency band (MHz)	Maximum allowable transmitter power		Maximum allowable EIRP	
	Fixed (W)	Mobile (W)	Fixed (dBW)	Mobile (dBW)
*	*	*	*	*
37,000-38,600	+55
38,600-40,000	1.5	+55

* * * * *

5. In § 21.108(c), the frequency "Above 31,300" is removed from the table and the frequency band 38,600 to 40,000 MHz and footnote 4 are added in numerical order to the table to read as follows:

§ 21.108 Directional antennas.

* * * * *

(c) * * *

ANTENNA STANDARDS

Frequency (MHz)	Category	Maximum beamwidth to 3 dB points (included angle in degrees)	Minimum antenna gain (dBi)	Minimum radiation suppression to angle in degrees from centerline of main beam in decibels						
				5° to 10°	10° to 15°	15° to 20°	20° to 30°	30° to 100°	100° to 140°	140° to 180°
*	*	*	*	*	*	*	*	*	*	*
38,600 to 40,000 ⁴	A	N/A	38	25	29	33	36	42	55	55

* * *

⁴ This antenna standard applies only to licensees of grandfathered links. Antennas installed prior to January 1, 1998, may be of Category B. However, antennas installed on or after that date shall be of Category A.

* * * * *

6. In § 21.122, paragraph (f) is added to read as follows:

§ 21.122 Microwave digital modulation.

* * *

(f) Facilities in the band 38,600-40,000 MHz that are licensed to licensees of grandfathered links and that are constructed on or after January 1, 1998 shall transmit at minimum equivalent digital efficiency of 1 bps/Hz and equipment installed on or after that date shall also have the capability to support the transmission of 1 bps/Hz.

7. In § 21.701, the frequency band 37,000-38,600 MHz is added to paragraph (a) in numerical order and paragraph (j) is revised as paragraphs (j)(1), (j)(2) and (j)(3) to read as follows:

§ 21.701 Frequencies.

(a) * * *

* * *

37,000-38,600 MHz

38,600-40,000 MHz⁴

* * * * *

(j)(1) Assignments in the band 37,000 MHz-40,000 MHz shall be according to the following channeling plan:

Paired Channel Blocks			
Channel Group A		Channel Group B	
Channel No.	Frequency Block (MHz)	Channel No.	Frequency Block (MHz)
1-A	38,600-38,650	1-B	39,300-39,350
2-A	38,650-38,700	2-B	39,350-39,400
3-A	38,700-38,750	3-B	39,400-39,450
4-A	38,750-38,800	4-B	39,450-39,500
5-A	38,800-38,850	5-B	39,500-39,550
6-A	38,850-38,900	6-B	39,550-39,600
7-A	38,900-38,950	7-B	39,600-39,650
8-A	38,950-39,000	8-B	39,650-39,700
9-A	39,000-39,050	9-B	39,700-39,750
10-A	39,050-39,100	10-B	39,750-39,800
11-A	39,100-39,150	11-B	39,800-39,850
12-A	39,150-39,200	12-B	39,850-39,900
13-A	39,200-39,250	13-B	39,900-39,950

14-A	39,250-39,300	14-B	39,950-40,000
15-A	37,000-37,050	15-B	37,700-37,750
16-A	37,050-37,100	16-B	37,750-37,800
17-A	37,100-37,150	17-B	37,800-37,850
18-A	37,150-37,200	18-B	37,850-37,900
19-A	37,200-37,250	19-B	37,900-37,950
20-A	37,250-37,300	20-B	37,950-38,000
21-A	37,300-37,350	21-B	38,000-38,050
22-A	37,350-37,400	22-B	38,050-38,100
23-A	37,400-37,450	23-B	38,100-38,150
24-A	37,450-37,500	24-B	38,150-38,200
25-A	37,500-37,550	25-B	38,200-38,250
26-A	37,550-37,600	26-B	38,250-38,300
27-A	37,600-37,650	27-B	38,300-38,350
28-A	37,650-37,700	28-B	38,350-38,400

Unpaired Channel Blocks	
Channel No.	Frequency Block (MHz)
29	38,400-38,450
30	38,450-38,500
31	38,500-38,550
32	38,550-38,600

(2) Channel Blocks 1 through 32 are assigned for use within Basic Trading Areas (BTAs). Applicants are to apprise themselves of any grandfathered links within the BTA for which they seek a license. In Channel Blocks 15 through 32, new Government links may be added if those links can be operated without unduly interfering with existing non-Government stations. All of the channel blocks may be subdivided as desired by the licensee and used within its service area as desired without further authorization subject to the terms and

conditions set forth in § 21.711. See § 24.202(b) of this chapter for the definition of BTAs and Public Notice, Report No. CW-94-02, for a listing of the counties comprising each BTA.

(3) Licensees shall not have an ownership interest in more than four of Channel Blocks 1 through 28 and no more than two of Channel Blocks 29 through 32 in any BTA.

(i) For the purpose of this section, licensees are entities having an ownership interest of five or more percent or other attributable ownership interest, as defined in Section 24.204(d), in a license in Channel Blocks 1 through 32. In applying Section 24.204(d), applicants who are neither broadband personal communications services (PCS) nor cellular licensees shall be treated as if they were broadband PCS applicants.

(ii) Grandfathered links shall be counted toward the ownership limit in each BTA through which they pass or in which they are located.

* * * * *

8. § 21.711 is revised to read as follows:

§ 21.711 Special requirements for operation in the band 37,000 to 40,000 MHz.

(a) Assigned channel blocks in the band 37,000-40,000 MHz that are licensed by Basic Trading Area (BTA) may be subdivided and used anywhere within the BTA without further authorization, subject to the following terms and conditions:

(1) No interference may be caused to existing or previously applied-for stations operating as a grandfathered link.

(2) The antenna structure height employed at any location shall not exceed the criteria set forth in § 17.7 of this chapter unless, in each instance, authorization for use of a specific maximum antenna structure for each location has been obtained from the Commission prior to the erection of the antenna.

(3) The field strength of any transmitter operating within an assigned channel block and BTA shall not exceed ____ dBu at the boundary of another BTA or a rectangular service area without the prior consent of the licensee to which that channel is assigned in such other BTA or rectangular service area.

(4) Licensees in the 37,000 to 38,600 MHz band shall maintain a computer-readable database with the coordinates of their sites, frequencies (occupied bandwidth) assigned to their sites, EIRP, and other technical information for all of their links needed to facilitate coordination with and the addition of new Government links.

(b) Conversion Plan: Licensees of rectangular service areas shall construct an average of four permanently installed and operating links per hundred square kilometers within their licensed service areas for each licensed channel block and shall file a certification stating that they have met said construction threshold by [insert date that is 18 months from the adoption of a Report and Order in this proceeding].

(1) The right to take advantage of the above eighteen-month build-out provision shall apply only to those entities holding valid licenses as of [insert the date of adoption of the Report and Order in this proceeding].

(2) No later than [insert 18 months from the adoption of a Report and Order in this proceeding], licensees of rectangular service areas not meeting the above construction threshold shall file a list of permanently installed and operating links that they wish to have grandfathered. Failure to file timely a list of installed and operating links shall result in automatic cancellation of the respective licenses.

(3) Licenses for rectangular service areas shall be automatically canceled on [insert 19 months from the adoption of a Report and Order in this proceeding] if the licensee does not file a certification stating that it meets the above construction threshold.

(4) Temporary links shall not be grandfathered.

(5) Any grandfathered link which subsequently ceases operations for a period of thirty consecutive days or more shall be deemed automatically forfeited, in which case the authorization shall be returned to the Commission, and the right to use "returned" spectrum shall go to the BTA licensee.

PART 94 - PRIVATE OPERATIONAL-FIXED MICROWAVE SERVICE

1. The authority citation for Part 94 continues to read:

AUTHORITY: Sections 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, unless otherwise noted.

2. In § 94.61(b), the frequency band 37,000 to 38,600 MHz is added in numerical order to the table and footnote 18 is revised to read as follows:

§ 94.61 Applicability.

* * * * *

(b) * * *

Frequency band (MHz)	
*	*
37,000 to 38,600	(18).
38,600 to 40,000	(9) (18) and (23).
*	*

* * *

18 Channel Blocks 1 through 32 are assigned for use within Basic Trading Areas (BTAs). Applicants are to apprise themselves of any grandfathered links within the BTA for which they seek a license. In Channel Blocks 15 through 32, new Government links may be added if those links can be operated without unduly interfering with existing non-Government stations. All of the channel blocks may be subdivided as desired by the licensee and used within its service area as desired without further authorization subject to the terms and conditions set forth in § 21.711. See § 21.701(j)(1) of this chapter for the channeling plan. See § 24.202(b) of this chapter for the definition of BTAs and Public Notice, Report No. CW-94-02, for a listing of the counties comprising each BTA.

* * *

3. In § 94.63, the frequency band 37,000 to 38,600 MHz is added to the second sentence of paragraph (a) to read as follows:

§ 94.63 Interference protection criteria for operational fixed stations.

(a) * * * As an exception to the above requirement, when the proposed facilities are to be operated in the bands 932-935, 941-944, 3700-4200, 5925-6425, 6525-6875, 10,550-10,680, 10,700-11,700, 17,700-19,700, 21,200-21,800, 22,400-23,000, 37,000-38,6000, or 38,600-40,000 MHz applicants shall follow the prior coordination procedure specified in § 21.100(d) of this chapter. * * *

* * * * *

4. In § 94.67, the frequency band 31,300 to 40,000 MHz is removed from the table and the frequency bands 31,300 to 37,000 MHz and 38,600 to 40,000 MHz are added in numerical order to the table to read as follows:

§ 94.67 Frequency tolerance.

* * * .

Frequency band (MHz)	Tolerance as percentage of assigned frequency
* * *	
31,300 to 37,000	0.03
37,000 to 38,600	0.001
38,600 to 40,000	0.001 ⁹

* * *

⁹ Equipment installed prior to January 1, 1998, may employ a frequency tolerance of 0.03%. However, equipment installed on or after that date shall comply with the $\pm 0.001\%$ tolerance limit.

5. In Section 94.71, paragraph 94.71(f) is added to read as follows:

§ 94.71 Emission and bandwidth limitations.

* * * * *

(f) For channel block assignments in the 37-40 GHz band, the authorized bandwidth is 50 MHz. When adjacent channels are aggregated, equipment is permitted to operate over the full channel block aggregation without restriction.

NOTE: Unwanted emissions shall be suppressed at the aggregate channel block edges based on the same roll-off rate as is specified for a single channel block in paragraphs 21.106(a)(2)(ii) and (iii) of this chapter.

6. In § 94.73, the frequency band 37,000 to 38,600 MHz is added to the table to read as follows:

§ 94.73 Power limitations.

* * *

Frequency band (MHz)	Maximum allowable transmitter power		Maximum allowable EIRP	
	Fixed (W)	Mobile (W)	Fixed (dBW)	Mobile (dBW)
*	*	*	*	*
37,000 to 38,600	+55
38,600 to 40,000	1.5	+55

* * *

7. In § 94.75, the frequency band 38,600 to 40,000 MHz is revised to read as follows:

§ 94.75 Antenna limitations.

* * * * *

(b) * * *

ANTENNA STANDARDS

Frequency (MHz)	Category	Maximum beamwidth to 3 dB points (included angle in degrees)	Minimum antenna gain (dBi)	Minimum radiation suppression to angle in degrees from centerline of main beam in decibels						
				5° to 10°	10° to 15°	15° to 20°	20° to 30°	30° to 100°	100° to 140°	140° to 180°
* 38,600 to 40,000 ¹³	* A	* N/A	* 38	*	*	*	*	*	*	*
				25	29	33	36	42	55	55

* * *

¹³ This antenna standard applies only to licensees of grandfathered links. Antennas installed prior to January 1, 1998, may be of Category B. However, antennas installed on or after that date shall be of Category A.

* * * * *

8. § 94.94 is amended by adding a sentence to the end of the section to read as follows:

§ 94.94 Microwave digital modulation.

* * * Facilities in the band 38,600-40,000 MHz that are licensed to licensees of grandfathered links and that are constructed on or after January 1, 1998 shall transmit at minimum equivalent digital efficiency of 1 bps/Hz and equipment installed on or after that date shall also have the capability to support the transmission of 1 bps/Hz.

Appendix B: Initial Regulatory Flexibility Analysis

Pursuant to Regulatory Flexibility Act of 1980, the Commission finds as follows:

A. Reason For Action: We find that there is a need for additional point-to-point microwave channels, which could be used by broadband PCS and cellular licensees for backhaul and backbone links. This rule making proceeding is initiated to obtain comment regarding proposals to make the 37 GHz band available for point-to-point communications and to amend the rules for the 39 GHz band.

B. Objective: The objectives of this proposal are to provide adequate point-to-point microwave spectrum, including channels for the support of broadband PCS and other services, and to provide for technical commonality across the bands.

C. Legal Basis: The proposed action is authorized by Sections 4(i), 303(c), 303(f), 303(g), 303(r) and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 303(c), 303 (f), 303(g), 303(r) and 309(j). These provisions authorize the Commission to make such rules and regulations as may be necessary to encourage more effective use of radio as is in the public interest.

D. Description, Potential Impact, and Number of Small Entities Affected: Bidding credits, installment payments, and reduced upfront payments are proposed for small businesses. In addition, this proposal may provide new opportunities for radio manufacturers and suppliers of radio equipment, some of which may be small businesses, to develop and sell new equipment. We invite specific comments on these points by interested parties.

E. Reporting, Record Keeping, and Other Compliance Requirements: Applicants must apply in order to be eligible for the auction. High-bidders at the auction must apply for their respective licenses. Rectangular service area licensees must either certify that they meet the construction threshold or file a list of operating links that they wish to have grandfathered. Licensees in the 37 GHz band would be required to maintain a computer-readable database with the coordinates of their sites, frequencies (occupied bandwidth) assigned to their sites, EIRP, and other information for all of their links in order to facilitate the addition of new Government links.

F. Federal Rules That Overlap, Duplicate, or Conflict With This Rule: None.

G. Significant Alternatives: If promulgated, this proposal will provide additional point-to-point spectrum, which can be used for the support of broadband PCS and other services. We are unaware of other alternatives which could provide sufficient spectrum in the immediate future. We solicit comment on this point.

Partial Dissenting Statement of Chairman Reed E. Hundt

Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands; Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz (ET Docket No. 95-183, RM 8553, and PP Docket No. 93-253)

This Notice of Proposed Rulemaking proposes to: (1) establish technical and service rules for the 37 GHz band; (2) alter significantly the rules for the 39 GHz band; and (3) license the spectrum in these bands by means of competitive bidding. I wholeheartedly support almost all aspects of this decision, which makes significant strides toward increasing the value of the spectrum to the public, by placing licenses in the hands of those who value the spectrum most highly. Regrettably, the Notice of Proposed Rulemaking includes a statement of intent with respect to processing that seriously undermines this otherwise commendable effort.

I therefore must dissent from the portion of the decision that announces an intention to continue processing those pending applications that are not mutually exclusive. Instead, the Commission should defer processing all applications during the pendency of the rulemaking. Assuming the Commission ultimately decides to auction this spectrum, the pending applications should be dismissed. Applicants would have an opportunity to refile, and participate in an auction.

There is no longer any serious dispute that sound public policy requires assigning spectrum licenses by competitive bidding except where there are clear and compelling public

interest reasons to the contrary. No compelling reasons have been given here. Auctions put licenses into the hands of those who value them most highly, and who are therefore most likely to provide service the public desires and to do so quickly and efficiently. Auctions also permit the U.S. Treasury to recover for the public a portion of the value of the public's spectrum.

By a unanimous vote, the Commission has expressed an intent to move to auctions for this spectrum. The Commission proposes to change the rules for the spectrum in this band, in large part because existing rules provide little or no incentive for licensees to build out systems and offer service. In fact, our current rules allow applicants to define the size of their service areas without any real showing of need. The only requirement is that the service area be drawn as a rectangle. The current rules actually create incentives for applicants to request large amounts of spectrum in large, self-defined, geographic areas, regardless of whether they are using the spectrum efficiently.

Under existing rules, applicants have paid only a \$180 application fee, which would be returned if the applications were dismissed. Often, when the Commission gives away licenses, the applicants sell the licenses shortly thereafter, and this spectrum is no exception. For example, one company that obtained 30 licenses in September 1993 soon sold them for \$12.5 million -- 2,300 times the amount the original licensee paid in application fees. We should not be surprised by these sales. They are the logical consequence of rules that assign spectrum by date stamp.

There is ample Commission precedent and clear legal authority for dismissing pending applications that are inconsistent with new Commission rules. See, e.g., Private Operational-Fixed Microwave Service, 48 Fed. Reg. 32,578 (1983), aff'd, Affiliated Communications Corp. v. FCC, No. 83-1686, unpublished judgment (D.C. Cir. May 8, 1985). The Commission gave away billions of dollars worth of spectrum before it obtained auction authority, but there is no reason to continue this practice. While any single decision to process pending applications (whether by lottery, or otherwise) may seem in isolation not to be terribly costly, those decisions in the aggregate inflict serious harm on the public interest.

Under current rules, once an applicant files, and the Wireless Telecommunications Bureau places the application on public notice, other interested applicants have a limited opportunity to file competing applications. Contrast this approach with the approach under auctions, in which the Commission publicly announces its intent to open up spectrum, holds public seminars, provides extensive information in bidding packages, and generally does everything it can to ensure that the universe of interested businesses have a full and fair opportunity to obtain licenses. Under the current rules, people interested in filing competing applications must obtain the services of Washington insiders -- lawyers and lobbyists -- who monitor the weekly public notices listing all applications.

This problem is especially acute in the case of the spectrum at 39 GHz, for which there was a land rush in July 1995, because it is spectrum that the Commission identified as useful for backhaul links required by Personal Communications Services (PCS) licensees.

Amendment of the Commission's Rules to Establish New Personal Communications Services,

Second Report and Order, GEN Docket No. 90-314, RM 7140, RM 7175, RM 7618, 8 FCC Rcd 7700, 7741. Most potential PCS licensees do not yet know where and whether they will obtain licenses (the C, D, E, and F block licenses). The winners in the A and B blocks, who received their licenses in June 1995, would have been required to act almost instantaneously to have a shot at the 39 GHz spectrum before the land rush.

The Commission itself has identified PCS winners as potential licensees for the 39 GHz spectrum. It makes sense to license this spectrum in such a way that PCS licensees have a real opportunity to participate. It makes no sense to process applications under rules that provide PCS licensees little or no meaningful opportunity to express their interest in this spectrum to the Commission. And yet, that is exactly what the Commission, by processing pending applications, would be doing.

If all pending applications were granted, there would be no channels left in most major markets, and few channels available in other markets. The majority (in which I join with respect to this point) would defer processing of mutually exclusive applications, and thus leave open the possibility that these channels might be available to future applicants, assuming that pending applications are dismissed, and the Commission proceeds to auction. Some may argue that half a loaf is better than none. I say simply that a whole loaf is better than half a loaf, and the Commission should not process any pending applications at all.

Issuing licenses by processing pending applications, rather than by auction, is a giveaway. In the absence of an auction, we do not know exactly what this spectrum is worth. However, extrapolating from publicly available values, the entire 39 GHz band could be worth \$950 million. Even if the pending non-mutually exclusive applications are worth a fraction of this amount, it is money that belongs to the American public. I see no reason to deprive the U.S. Treasury of meaningful revenues, particularly if we simply propose to give these spectrum licenses away to applicants that are likely to resell them privately for significant amounts. Although this is the season of giving, this is not supposed to be the Federal Chanukah/Christmas Present Commission, particularly as Congress and the Administration struggle to find ways to meet the country's pressing need for a balanced budget.

SEPARATE STATEMENT

OF

COMMISSIONER ANDREW C. BARRETT

Re: Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands; Implementation of Section 309(j) of the Communications Act- Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz [Notice of Proposed Rulemaking and Order]

Today, the Commission issues a *Notice of Proposed Rulemaking* proposing to amend Parts 1, 2, 21 and 94 of our rules to provide channeling plan and licensing and technical rules for fixed point-to-point microwave operations in the 37.0-38.6 GHz band. We also propose to amend the licensing and technical rules for 38.6-40.0 GHz band. The Commission has decided to process pending applications that are non-mutually exclusive and which were put on public notice sixty (60) days before the date of the recently imposed application freeze. Pending mutually exclusive applications and those non-mutually exclusive applications put on public notice less than sixty (60) days before the freeze will be held in abeyance pending the completion of the rulemaking in this proceeding.

I support the decision to process the non-mutually exclusive applications for two (2) primary reasons. First, the Commission does not have auction authority for applications that are not mutually exclusive.² Therefore, I see no justification for refusing to process these applications in order to provide some certainty for those applicants. Second, while some would have us believe that a great deal of these applications may be from speculators, I continue in my belief that the government should not prejudge any applicant's intention with respect to the provision of service. Again, I emphasize that not every applicant that does not acquire a license through the competitive bidding process should be deemed suspect. To that end, I believe that the Commission has determined to take the appropriate course of action with regard to the pending non-mutually exclusive applications.

²See 47 C.F.R. § 21.31(b).

SEPARATE STATEMENT
OF
COMMISSIONER SUSAN NESS

DISSENTING IN PART

Re: *Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands*

Today, we propose new service and licensing rules for the 37 and 39 GHz bands which advance our goal of efficient use of the spectrum and further our Congressional mandate to place licenses in the hands of those that most value them. I strongly support that decision. However, I must dissent from that portion of today's decision which frustrates those goals by permitting the processing and licensing of pending applications.

I do not favor auctions at all costs and in every instance. But absent a showing of unique and compelling circumstances -- a showing which is not made here -- pending applications should be dismissed if and when we decide to change our licensing rules, and processing should cease in the interim. It is fundamental to me that applicants seeking to use the radio spectrum not be accorded rights or expectancies that outweigh the Commission's responsibilities to serve as a responsible steward of the spectrum and to effectuate Congressional mandates.

The Commission plays a critical role in spectrum management. The public benefits of new technologies and innovative services can be realized only if the Commission can identify appropriate spectrum and modify its rules to facilitate development of those new services. Congress expands the Commission's authority to award spectrum licenses to include competitive bidding; again, we change our rules to implement Congress' mandate. Failure by the Commission to modify our rules to respond to these and other changes as they arise would clearly be irresponsible.

The Notice of Proposed Rulemaking we adopt today is an example of the Commission's exercise of these responsibilities. We seek to ensure that a portion of the spectrum -- specifically the 37 GHz and 39 GHz bands -- will be made available for use in a manner that best serves the advancement of new wireless services and to devise appropriate rules for channeling plans, service areas and licensing methods that carry out that purpose. These actions are fundamental to carrying out our spectrum management responsibilities.

The majority decision to process several hundred pending applications for channels in the 39

GHz band, however, frustrates the future direction our Notice proposes for that band. Both the service areas and the licensing methods we use today for the 39 GHz band are inconsistent with the changes we propose, changes that we believe will be critical to the development of services using these frequencies. By awarding these hundreds of licenses, we will be carving out that many more "holes" in the service areas we ultimately license, obviously impairing the value of the licenses at auction. We will also be rewarding entities that filed large numbers of preemptive applications, anticipating our transition to competitive bidding, in order to obtain as many channels as possible before the Commission auctions the "leftovers".

Our legal authority to dismiss the pending applications is not in doubt. It is well established that the Commission may apply new rules to pending applications.¹ The Commission has previously done so² and has dismissed pending applications, without prejudice to the applicants' right to re-file, as a result of rule changes.³

Further, our Congressional mandate to employ competitive bidding clearly requires us to adopt new licensing rules for auctionable services. We have tentatively concluded in the Notice we unanimously adopt today that auctioning the remaining channels in the 39 GHz band as well as the 37 GHz band will best accomplish Congress' objectives. Our licensing rules must promote "the development and rapid deployment of new technologies, products and services", ensure "efficient and intensive use of the electromagnetic spectrum", and assure "recovery for the public of a portion of the value of the public spectrum resource..." Section 309(j)(3). Licensing the pending 39 GHz applications does not meet these goals. The entities who have filed the pending applications should instead have the opportunity to participate -- along with everyone else -- in the auction of licenses for these frequencies.

Of course, it would be preferable if we could change our rules only at times when no

¹ See e.g., Storer Broadcasting v. United States, 351 U.S. 192 (1956); Hispanic Information and Telecommunications Network v. FCC, 865 F.2d 1289, 1294-95 (D.C. Cir. 1989).

² See, e.g., Amendment of the Commission's Rules to Allow the Selection from Among Mutually Exclusive Competing Cellular Applications Using Random Selection or Lotteries Instead of Comparative Hearings, 98 F.C.C. 2d 175 (1984), recon., 101 F.C.C.2d 577 (1985); Request for Pioneer's Preference in Proceeding to Allocate Spectrum for Fixed and Mobile Satellite Services for Low-Earth Orbit Satellites, 7 FCC Rcd. 1625, 1628 n. 22 (1992); Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Services, 7 FCC Rcd. 4484, 4489 n. 66 (1992).

³ See Private Operational-Fixed Microwave Service, 48 Fed. Reg. 32,587 (1983), aff'd, Affiliated Communications Corp. v. FCC, No. 83-1686, unpublished judgment (D.C. Cir. May 8, 1985).

applicant would be affected. But in this time of transition, as we move from lotteries and comparative hearings to auctions, from small site-specific service areas to wide area licensing, our ultimate policy goals outweigh the impact on pending applicants.

The frequencies at 39 GHz, once hardly noticed, have now become highly desirable, largely due to the development of innovative technologies and services. It is precisely circumstances such as these that make it essential that the Commission have the flexibility to change its rules to encourage the most efficient use of spectrum. The service rules put in place in the past do not properly reflect the uses envisioned for this spectrum today. Our old licensing methods were adopted over twenty years ago -- long before our Congressional mandate to auction and prior to development of innovative new uses for this spectrum.

The old rules neither encourage efficient spectrum use nor recover for the public the value of this spectrum. That is why I strongly agree with the proposal to change the rules but I must disagree with the majority's decision to issue new licenses in the 39 GHz band before our new rules are in place.

SEPARATE STATEMENT OF
COMMISSIONER RACHELLE B. CHONG

Re: *Amendment of the Commission's Rules Regarding the 37.0 - 38.6 and 38.6 - 40.0 GHz Bands (ET Docket No. 95-183); Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, 37.0 - 38.6 GHz and 38.6 - 40.0 GHz (PP-Docket No. 93-253) -- Notice of Proposed Rule Making*

I fully support the proposals set forth in today's *Notice of Proposed Rule Making* for revising our rules for licensing of spectrum in the 37-39 GHz band. I write separately to explain my views on our decision to process pending non-mutually exclusive applications -- and on why I respectfully disagree with the arguments raised by my dissenting colleagues.

The issue is whether we should process pending 39 GHz applications that are uncontested, or whether we should, as the dissenters suggest, postpone any action on these applications until the conclusion of this rulemaking, and possibly dismiss them at that point. This is an issue that reoccurs whenever we propose to revise our licensing rules in an existing service, and it is particularly acute where, as here, we are proposing to adopt competitive bidding as the new method of selecting licensees. Having carefully considered the facts and circumstances pertaining to the pending applications in this service, I believe that both legal and policy considerations weigh in favor of processing these applications.

First, these are *non-mutually exclusive* applications that are immediately grantable under our rules. These applications have been placed on public notice (including dissemination on the Internet), giving others the opportunity to file competing applications, and the original applications remain uncontested. Thus, we are not dealing here with resolving *mutually exclusive* applications that could be subject to auction if we were to adopt our proposed competitive bidding rules. Indeed, even if we had auction rules in place today, these applications would *not* be subject to auction. Under Section 309(j)(1) of the Communications Act, the Commission has authority to use competitive bidding *only* where mutually exclusive applications are filed.

Second, I believe that not processing uncontested applications would be inconsistent with Section 309(j)(6)(E) of the Act, which states that competitive bidding authority does not relieve the Commission of the obligation to take steps to avoid mutual exclusivity in the application and licensing process. If we were to dismiss these applications and require the applicants to refile under auction rules, we would in effect be subjecting them to double jeopardy by allowing a second opportunity for mutually exclusive applications to be filed. This appears to me to be *seeking* opportunities for mutual exclusivity rather than avoiding them where possible as the plain language of the statute requires.

Third, the fact that these applications are not mutually exclusive strongly suggests that the spectrum covered by these applications is neither in significant demand nor of high value. Generally, it is the highest-value markets that are most likely to be subject to competing applications. Thus, I do not believe granting non-mutually exclusive applications constitutes any kind of "giveaway" of potentially high-value spectrum prior to auction.

Fourth, I am not persuaded that granting these applications would create incentives for speculation. Although a large number of 39 GHz applications have been filed within the last six months or so, many applications (if not most) come from entities with significant resources and communications experience. There is no indication of speculative activity by application mills of the type we have seen in some other services. Moreover, to encourage only serious applicants, we propose in this *Notice* to impose stepped-up construction requirements on 39 GHz incumbents and to license new channels in the 37 GHz band. Both of these steps are likely to limit opportunities for any existing 39 GHz licensee that seeks to profit from the transfer of its license.

Finally, granting these applications will help competition to develop while this rulemaking is pending. Our early licensing of 39 GHz has substantially benefitted one licensee in particular, because it was the first to aggressively pursue development of this spectrum. A number of other applicants are now poised to compete with this company. If we delay processing of uncontested applications for the six to twelve months that this rulemaking could take, we risk impeding competition in the near term and inadvertently conferring an advantage on one licensee. Given all of the above, I would prefer to take swift action to get more competition in place in the near term and grant these non-mutually exclusive applications.